Fall 12-1-2012

Preschool Curriculum: Choices that Promote Learning

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The University of Southern Mississippi

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by

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Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
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ABSTRACT

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Ongoing research has shown that preschool is beneficial not only to early childhood success, but also in providing long-term benefits (Wong, Cook, Barnett, & Jung, 2008). With standards for early childhood being generated at the national level with the announcement of the common core standards nationwide and at the state level through state-mandated early learning guidelines and benchmarks, preschools are turning to specified curriculum content and mandated outcomes for early education programs. Effects of preschool programs vary (Barnett et al., 2008) due to differences in program curriculum and method of delivery. As the knowledge and understanding of how young children learn increases, there have been modifications in how curriculum is selected and taught (Klein & Knitzer, 2006). The purpose of this research was to determine if research-based curricula are in use and if those models are effective in promoting growth and learning among preschool students. The results of the data suggest that the implementation of a research-based curriculum made a statistically significant positive difference in student progress and that the students who were taught by teachers with a state teaching certification demonstrated greater student progress than those who were taught by teachers with a two-year degree or no certification. The study also investigated teacher training and the monitoring and observation of teachers.

The data suggest that training teachers before they teach the curriculum and support while teaching makes a statistically significant positive difference in student progress. Monitoring and observation were found to make a statistically significant negative difference in student progress. As Mississippi moves toward funding preschools in many districts, studies of this nature will be of assistance in guiding and making curriculum choices.

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December 2012

ACKNOWLEDGMENTS

I would like to thank the many people who have contributed to this study and dissertation. This document is the result of a long-term interest and commitment to early childhood education.

I would like to thank my committee, Dr. David Lee, Dr. James Johnson, Dr. Rose McNeese, and Dr. Thelma Roberson, for sharing their expertise and for offering feedback. Their guidance and support helped bring this dissertation to fruition.

Finally, I would like to thank my family and friends for their love and support. My parents, Charles and Carol Ann Curet, who instilled in me a love for learning, my wonderful family, David, Cecilia, Maggie, Noah, and Eva, who have tirelessly supported me throughout the process, and my dear friend, Beth Bellipanni, for always believing in me and never letting me quit. The support from all helped make writing this dissertation possible. Thank you.

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CHAPTER I

INTRODUCTION

Statement of the Problem

Early childhood education is changing rapidly. As states initiate and expand preschool programs, public and private preschools have become the initial introduction into formal education. Research suggests that preschool programs offered to children between the ages of three and five are a worthwhile investment not only for preparing students for kindergarten, but are also instrumental in making them more successful throughout their entire lives (Barnett, Frede, Mosbasher, & Mohr, 1987; Reynolds, Temple, Robertson, & Mann, 2001; Wong et al., 2008). It has been shown repeatedly through several decades of research that high-quality early childhood programs have a positive effect on both short-term and long-term childhood development (Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002; Dominguez, Vitiello, Maier, & Greenfield, 2010; Early, Pianta, & Cox, 1999; Galinsky, 2006; Schweinhart et al., 2005; Wong et al., 2008). In addition to short-term effects on academic achievement, long-term effects of preschool programs include fewer arrests, fewer teen pregnancies, and higher employment (Gilliam & Zigler, 2000). Researchers in the field of preschool and early literacy have reached a consensus that there are significant positive effects for students' social, emotional, physical, and academic interests when entering kindergarten (Barnett, 2008). Well-designed preschool education programs generate long-term improvements in school success. The growing trend to generate standards for

early childhood is fueling the need to specify curriculum content and outcomes for early education programs.

Most states claim that their early learning guidelines for three to five year old children align with the common core learning standards developed for kindergarten through grade 12, or at least the kindergarten standards, but the amount of alignment varies greatly (Zubrzycki, 2011). Some states have rewritten their early learning guidelines to align with the common core standards, as in Mississippi, while others have designed charts to determine how their current frameworks connect to the standards. Many different programs have been shown to produce positive effects on learning and development, but those effects vary in size and persistence by program (Barnett et al., 2008).

In the past decade there has been an exponential increase in the knowledge and understanding of how young children learn. Klein and Knitzer (2006) stated that studies of how early learning experiences promote achievement have resulted in research that is causing an alteration in the way curriculum and professional development are understood in the preschool years. It is now understood through the research of Klein and Knitzer (2006) that an intentional curriculum should be research based. An intentional curriculum is one that emphasizes the teacher being actively engaged with his or her students, paying attention to students' social skills, and being responsive to cultural diversity. Research, training, and monitoring are stressed as very important in guiding teachers to effectively choose and fully implement research-based curricula at the early childhood level.

Purpose of the Study

The purpose of this study was to determine whether a planned research-based curriculum lends to the success of a preschool program and, if so, which of the available curricula are being used. It also sought to determine to what extent the full curriculum was implemented and what impact training, support, and monitoring had on the success of a program. Through the use of a survey, the study sought to determine if any specific research-based curricula were in place and, if so, what kinds of training, support, and monitoring were offered to teachers to help them teach it successfully.

Research Questions

Research has focused on the aspects of preschool that are helpful to long-term student achievement and what constitutes an effective preschool program. The factors being explored in this research were related to preschool curricula in the areas of language arts, mathematics, and science.

1. Does the teacher using a selected research-based curriculum in the area of language arts report improved mastery of skills as compared to teachers who use a teacher-planned curriculum?
2. Does the teacher using a selected research-based curriculum in the area of mathematics report improved mastery of skills as compared to teachers who use a teacher-planned curriculum?
3. Does the teacher using a selected research-based curriculum in the area of science report improved mastery of skills as compared to teachers who use a teacher-planned curriculum?

4. Does the teacher using a teacher-planned curriculum report improved mastery of skills as compared to teachers who use a research-based curriculum?
5. Is there a relationship between mastery of skills by students and the full use of furnished curriculum components by teachers who implement a research-based curriculum?
6. Do teachers who have received training and support throughout the year in teaching the planned curriculum report improved student mastery of skills?
7. Does monitoring and observation of teaching the curriculum have an effect on reported students' mastery of skills?
8. Does the level of teacher certification make a difference in students' mastery of skills?

The purpose of this study was to answer these crucial questions in reference to the implementation and use of research-based curriculum in public and private preschools in the State of Mississippi.

Hypotheses

Based on the Research Questions, the Hypotheses are as follows:

$H0_1$: There is not a statistical difference in mastery of skills in the area of language arts development when teachers implement a research-based curriculum as compared to teachers who implement a teacher-planned curriculum in language arts.

$H0_2$: There is not a statistical difference in mastery of skills in the area of mathematical development when teachers implement a research-based curriculum as compared to teachers who implement a teacher-planned curriculum in mathematics.

$H0_3$: There is not a statistical difference in mastery of skills in the area of scientific development when teachers implement a planned curriculum in science as compared to teachers who implement a teacher-planned curriculum.

$H0_4$: There is not a statistical difference in mastery of skills in the areas of language, mathematic, or science when teachers implement teacher-planned curricula as compared to teachers who implement research-based curricula.

$H0_5$: The percentage of components of the curriculum put to use by the teacher has no statistical impact on students' mastery of skills.

$H0_6$: The training of teachers in the selected curriculum does not have a statistical impact on students' mastery of skills.

$H0_7$: The monitoring of and planning by teachers while teaching the planned curriculum does not have a statistical impact on students' mastery of skills.

$H0_8$: The teachers' certification has no impact on students' mastery of skills.

Definition of Terms

A number of key terms used in this research have been defined because they share common characteristics in the literature. The following definitions, unless specified otherwise, were obtained from IES National Center for Educational Statistics website.

Curriculum- The content and organization of a preschool program, including all daily activities, transitions, and routines, which have an impact on the child's physical, social, emotional, and intellectual development (Ramey & Ramey, 1998).

Early childhood education- The care and education in the earliest stages of childhood. According to the National Association for the Education of Young Children (NAEYC) (2003), it spans from birth to age eight.

Furnished curriculum components- Implementing a curriculum exactly as described is referred to as implementation fidelity (Hamre et al., 2010). Curriculum is composed of three major components: objectives, content, and learning experiences (Leiberman, 2011).

Head Start- A United States educational program for disadvantaged preschool children established under the Economic Opportunity Act of 1964. Aimed initially only at poor children, its purpose was to organize programs that would prepare preschool children for elementary school. In 1969 the program was transferred to the Department of Health, Education, and Welfare (now Health and Human Services). It has since been extended to children above the poverty level whose parents pay according to their income (Barnett, 2008).

Longitudinal effects- Any effects of preschool education observed beyond the kindergarten year.

Preschool- A class enrolling children younger than five years of age and organized to provide educational experiences under professionally qualified teachers during the year or years immediately preceding kindergarten.

Private daycare- Any preschool or childcare center not affiliated with public education and funded by tuition, private donations, and/or government subsidy.

Private pre-kindergarten- Pre-kindergarten programs not affiliated with public education and funded by tuition and private donors.

Process quality- Refers to an examination of teachers' and children's interactions while in the classroom and focuses on the actual atmosphere of the room while teaching the curriculum content.

Professional development or training- Professional preparation of teachers, usually through formal instruction, coursework, or activities that develop an individual's skills, knowledge, and other characteristics as a teacher *(*Arrends, 2004).

Quality standards checklist- A list developed by the National Institute for Early Childhood Research consisting of 10 research-based quality standard benchmarks for program features likely to affect the program's capacity to support children's optimal learning and development.

Research-based curriculum- A written plan, based on scientifically valid research and sound child development principles that includes goals for

children's development and learning, is comprehensive and linked to ongoing assessment, and is focused on a quality learning environment with appropriate teaching practices. The curriculum should clearly define roles for staff and parents to help students achieve those goals and supply materials needed to support the implementation of the curriculum. (Chambers, Cheung, Slavin, Smith, & Laurenzano, 2010)

Short-term effects- For the purpose of this study, any effects of preschool education observed by the end of the kindergarten year.

Delimitations

The study was delimited by the fact that it focused only on curriculum models and not on teacher delivery of the material or on teacher-student interaction and classroom atmosphere.

Assumptions

It was assumed that the participants in this study answered the survey honestly and accurately. It was also assumed that, when answering the survey questions, participants were familiar with the terms used and understood the questions being asked of them.

Significance of the Study

The movement from home-based instructional education toward more structured preschools has created new and greater expectations of students as they enter kindergarten. The role of preschool has changed dramatically. It is expected nationwide that children who enter kindergarten have been prepared to begin their formal education. This movement to more structured preschools has

created expectations that include appropriate behavior, communication skills, certain academic abilities, and the ability to take care of their own physical needs (Early, Pianta, Taylor, & Cox, 2001). According to the National Center for Education Statistics (Snyder & Dillow, 2011), over 63% of children aged three years to five years were enrolled in early childhood programs. As the number of children attending preschool programs continues to increase, the need to define quality and what constitutes effective early childhood programs has become a significant focus of research. By studying curricular needs and practices, information can be gained as to how to better prepare students to enter school ready to learn and thereby lead to their future success as a student.

There is a wide variety of preschool curricula currently available and in use; however, there has been a serious lack of valid evaluation of the different curricula in order to determine the effectiveness of each on students' school readiness (Preschool Curriculum Evaluation Research Consortium, 2008). While policymakers at the federal, state, and local levels recognize the key role that preschool education plays in children's learning and development, they have less understanding of what constitutes a quality preschool program curriculum (Frede & Ackerman, 2007). Although there are a variety of preschool curriculum models, research suggests that pre-kindergarten classrooms that use a research-based curriculum have a more positive impact on learning than ones with no set curriculum (National Research Council, 2000). While the findings of two recent large-scale studies supported the general benefits of early childhood education (U.S. Department of Health and Human Services, 2010; Wong et al.,

2008), there have been few high-quality studies of programs that studied the development of early language and literacy skills (Whitehurst, 2004). The recognition of the significance of the preschool period for building the foundation for future academic success leads to the need for preschool curricula and teachings to keep up with the growing need for development of skills. To date there are a very limited number of published studies that evaluate the impact of different preschool curricula or planning. Although no single curriculum model or approach works for every student or every preschool, Holland (2005) asserted that most children ages three years and four years are apt to learn more and be better prepared for formal schooling when they have attended well planned, high-quality preschools in which curricular goals are indicated and taught. The National Association of Early Childhood Specialists in the State Departments of Education (NAEYC/SDE, 2003) reported that policy makers, members of the early childhood profession, and all other stakeholders with an interest in early childhood education have a responsibility to strive to implement a curriculum that is carefully planned, challenging, developmentally appropriate, culturally sensitive, comprehensive, and likely to promote a positive growing and learning experience for all young children. In a joint position statement the National Association for the Education of Young Children and the National Association of Early Childhood Specialists (2003), “curriculum is more than a collection of enjoyable activities. Curriculum is a complex idea containing multiple components, such as goals, content, pedagogy, or instructional practices. Curriculum is influenced by many factors, including society’s values, content

standards, accountability systems, research findings, community expectations, culture and language, and individual children's characteristics" (p. 6).

Summary

As states initiate and expand preschool programs in response to research that shows how beneficial the implementation of curricula is in the learning process, programs are seeking the best possible way to educate the students. The role of preschool is changing dramatically. While many of the preschools in Mississippi still use teacher-planned curricula, others have purchased research-based curricula to implement in their preschool programs. This study gathered data to determine which of the two methods was being used in public and private preschools in Mississippi and which of these was the best choice to promote student growth and learning. The study also investigated how much training and support were offered to the teachers before and while teaching and examined the monitoring processes in place. All of these factors play a significant role in determining the success of a program; and since there has been an exponential increase in the knowledge of how young children learn, curriculum and training should meet the needs of early childhood students.

CHAPTER II

LITERATURE REVIEW

Theoretical Foundations of Preschool Curriculum

Success in the early years of school is crucial since it is during these first years that essential competencies for future academic success are established (Early et al., 2001). While policymakers at the federal, state, and local levels recognize the importance of preschool in children's learning and development, they have less understanding of what constitutes a quality preschool curriculum. The growing emphasis on preschool and the need to align its standards and expectations with the common core standards is generating an interest in ensuring preschool curriculum is designed to prepare children to meet the rigorous standards expected of them in kindergarten (Rose, 2012). The following studies report findings that preschool is indeed beneficial to long-term student achievement, but there are currently very little data on the use of research-based curriculum by public and private preschool teachers to support students' success upon entry into elementary school settings. If preschool programs are to be effective, it is not enough to just set up classrooms with trained teachers. Curriculum decisions must be made to support the programs and have quality educational services (Frede & Ackerman, 2007). While those such as John Locke and Jean Jacques Rousseau provided the philosophical foundations of early childhood education, Froebel, Montessori, and Steiner created its curriculum and methodology (Platz & Arellano, 2011). More recently, the methodology has been scientifically substantiated by the research of Freud,

Piaget, and Erikson. Researchers Miller and Almon (2009) stated that while there are differences in the methods and approaches of these originators of early childhood education, the common thread and principle of all is that early childhood curriculum and practice have to be adapted to the maturing needs, abilities, and interests of the child.

In the research, Miller and Almon (2009) asserted that early childhood curriculum is the most solidly grounded in philosophy, methodology, theory, and research of curriculum at any level. Those who contributed to planning early childhood education came from professions outside of the academic fields. Miller and Almon (2009) stated that this is what makes early childhood education unique; it begins with the child, not the subject matter.

Historical Perspectives of Pre-Kindergarten and Head Start

The development of preschool programs and the curriculum they use began with the Works Progress Administration (WPA) in the 1930s. As stated by Marshall, Sears, and Schubert (2000), the WPA established the Nursery Project for low-income children aged two years to four years to allow parents the opportunity to seek employment. In addition to teaching personal and social skills, the nurseries provided nourishing meals and medical attention. With this nursery schools movement, there came an identification of early childhood education as preschool or pre-kindergarten education. By 1924 there were 28 nursery schools in just 11 states. In 1926, Patty Hill began the National Committee on Nursery Schools by inviting a select group of educators to New York. This group evolved into what is known today as the National Association

for the Education of Young People (NAEYC). During its second conference in 1927, the National Committee on Nursery Schools recommended a four-year degree for teachers in nursery schools to better facilitate their communication with nutrition and psychology specialists. During the 1930s the Great Depression led the WPA to set up emergency nursery schools to provide work for unemployed teachers. By 1933 there were 1,700 preschools in the United States and by 1940 there were in excess of 2,500 nursery schools in the public and private sector (Marshall et al., 2000).

Following World War II, many day care centers and nursery schools closed and remained closed until the summer of 1965 brought about the beginning of Head Start. Head Start generated more federally funded intervention programs, and in the 1980s and 1990s states began funding their own individual preschool programs. Head Start has continued updating its educational processes. In January 2012 Head Start released the Head Start-Common Core Correlation Project. This project aligns Head Start's Child Development and Early Learning Framework with Common Core State Standards for kindergarten in the areas of Language Arts and Mathematics (Rose, 2012). Rose states the correlation project considers the Common Core Kindergarten Standards and incorporates them into the curriculum expectations for the Head Start students in order to prepare them for the demands of formal instruction.

In order to understand the impact of early education on young children, it is important to realize the number of children now participating in early childhood

educational programs. Approximately seven out of every 10 children attend preschool at age four (Barnett, Hustedt, Friedman, Boyd, & Ainsworth, 2007). The increased enrollment of preschool students has led to greater interest in what is being taught and how it is being taught in the early childhood years, as well as increased interest in the effects of preschool education on students' long-term academic and social success.

Longitudinal Studies on the Impact of Quality Preschool Education

Many longitudinal studies have been conducted on the long-term positive benefits of attending preschool. The following long-term studies have provided evidence that quality early education can produce long-term success not only for young children, but also for society as a whole. The most notable of these studies are the High Scope Perry Preschool Study, the Abecedarian Project, and the Chicago Child Parent Program (CPC). These studies provided evidence that the cost benefits to society far exceeded the actual cost of high-quality early education. Studies show an average return rate of over $7.00 on every dollar invested. This is based on economic well being and reduced public expenditures for social welfare services (Barnett et al., 2007).

The significance of the cost benefits for early childhood education led Galinsky (2006) to further examine and define the characteristics of these programs. The characteristics that were found in each of the three programs included:

1. All programs implemented early intervention by enrolling children from birth to age three years.

2. Education focused on all aspects of children's intellectual, social, emotional, and physical growth.
3. All three programs had high-quality, well-educated, well-trained and well-compensated teachers, which resulted in low turnover in staff.
4. Class sizes were limited and all had high teacher-to-student ratios.
5. Parent contact and support were consistent throughout the child's learning experience.
6. The focus of all three of the programs was on children's learning and growth, not achievement.
7. Ongoing professional development was offered and taken advantage of by the teachers who all considered themselves life-long learners.
8. The programs all had very clear goals and expectations for the children and leadership that pursued those goals. (Galinsky, 2006, p. 19)

High Scope Perry Preschool Study

The High Scope Perry Preschool Study was started in the early 1960s and is now thought of as a landmark study that helped to establish the overall value of high-quality preschool education. The findings in the study by Schweinhart et al. (2005) indicated that only 17% of the children enrolled in the program were retained or placed in special education as opposed to 38% of the children who had not been enrolled in the program. As for the long-term effects, Epstein (1996) reported that there was a substantial statistically significant effect on the achievement test scores for 14 year olds. Since 1970 High Scope has published five comprehensive monographs on the effects of the program, one at the end of

the preschool enrollment, one at age 10, one at age 15, one at age 19, and one at age 27. High Scope has also collected data for a report on the effects of the preschool program at ages 39-41 years of age (Schweinhart et al., 2005).

In comparing the preschool group to the no-preschool group, the following significant differences were found. Only 7% of adults who had participated in the Perry Preschool program had been arrested five or more times, whereas 35% of those who had not participated in a preschool program had been. As for earnings, 29% of adults in the program were four times more likely to earn $2,000 or more per month, and only 7% of the adults who had not been in the program had earnings in that range. Thirty-six percent owned their own homes if they had been through the program, as opposed to 7% of those who had not been in the preschool. High school graduation rates for those in the program were 71% compared to just 54% of nonparticipants. Finally, 44% of women in the program were married when interviewed at age 27, whereas only 7% of the nonprogram women were married.

There was also a cost-benefit analysis done on the program that weighed the cost of the preschool program compared to the economic benefits resulting from the program. It was determined by analysis of the participants at age 27 that every public dollar spent on the program saved $7.16 in tax dollars (Schweinhart et al., 2005).

The Abecedarian Project

The Abecedarian Project was a controlled scientific study of the potential benefits of early childhood education for children being raised in poverty. Early

identification methods were used in the project conducted by The University of North Carolina (Campbell et al., 2002). Four groups born between 1972 and 1977 were randomly assigned to either an intervention group or the control group. The children in the intervention group received high-quality, individualized educational intervention from infancy through age five years. The children's progress was monitored with follow-up studies at ages 12, 15, and 21. It was determined that children who participated in the intervention program had higher cognitive test scores and better academic achievement from the toddler years to age 21. They were more likely to attend a four-year college and obtain a better employment status. In a study of participants in the project at age 30, individuals who had been in the program had attained significantly more years of education. The findings of the study provide strong evidence for educational benefits, noting that 23% of the participants in the preschool program had earned a four-year degree in higher education as compared to just 6% of the control group (Campbell et al., 2012).

Chicago Child Parent Project

The Chicago Child-Parent Center Project (CPC) investigated the educational and social development of 1,539 children who completed kindergarten programs in the Chicago Public Schools in 1986 (Reynolds, Suh-Ruu, & Topitzes, 2004). This study has followed the progress of the children who participated in the project through surveys of the parents, teachers, and youth and by interviewing the participating youth. The CPC program is a center-based early intervention program that provides not only educational support, but also

family support services as well. The findings of this study were much the same as the two previously discussed studies, the High Scope Perry Project and the Abecedarian Project. The participants scored higher on reading and math assessments in their elementary years; even many years later, graduation rates of those who attended the preschool program were higher, participants were less likely to repeat a grade level, and those who had attended the preschool program had lower arrest rates (Reynolds et al., 2001). It was found that for every dollar invested in the preschool program, the return to society was $7.14 by reducing costs of remedial education and justice system expenditures.

Characteristics of a Quality Preschool

Pianta referred to variations in classroom quality as variations in opportunities to learn (Hamre & Pianta, 2005; Pianta & Kraft-Sayre, 2003). The quality of preschools and the education they offer varies greatly. Not all preschools are equal in the opportunities they provide to students in teaching them social, emotional, and cognitive skills that are so critical to early school success (Pianta & Kraft-Sayre, 2003). The full potential of preschool education can only be achieved by the identification of not only the physical aspects of the preschools, but also the identification of specific classroom practices and interactions. This can be achieved through reliable and valid assessments of important readiness skills and classroom processes that are essential to the overall goal of enhancing children's opportunities to learn. There has been a sharp increase in research on classroom quality (Burchinal, Cryer, Clifford, & Howes, 2002; Hamre & Pianta, 2005). This research concluded that classroom

quality is very much defined not only by the physical aspects of the preschool program, but also by what teachers do and how they interact with the students (Dominguez et al., 2010). Pianta and Stuhlman (2004) asserted that measures of classroom quality should take note of teacher-student interaction because "interactions between children and teachers are a primary mechanism through which classroom experience affects development" (p. 454). The most effective preschool programs make use of responsive teaching by which teachers strive to meet each of the students' needs by being focused on the individual students and on using appropriate teaching strategies to meet those needs (Galinsky, 2006). Preschool classrooms are typically taught by a teacher and an assistant teacher. Although research that focuses specifically on the qualifications of assistant teachers is rare, there is evidence of assistant teacher qualifications having an effect on teaching quality (Barnett, Carolan, Fitzgerald, & Squires, 2011). There is much evidence on the educational importance of the qualifications of preschool teaching staff in general and the effect that has on the quality of not only the education offered, but on the classroom environment as well (Bowman, Donovan, & Burns, 2001; Burchinal et al., 2002; Howes, 2000; Whitebrook, 2003).

Preschools that seek accreditation as a quality preschool on the national level must meet the Early Childhood Program Standards as defined by the National Association for the Education of Young Children (Clifford et al., 2005). According to these standards, a quality preschool program should promote positive relationships among all students and adults; the program should fully

implement a research-based curriculum that addresses social, emotional, physical, language, and cognitive aspects of the education; teachers should use developmentally appropriate teaching practices and be qualified in early childhood education; and student assessment used should be systematic with results used to benefit individual students. The standards also address health, stating preschools should promote nutrition and health and a safe environment. Quality preschool programs are expected to establish and maintain collaborative relationships with the families of students and the communities in which they reside. Finally, a quality preschool administration is expected to implement policies and procedures to maintain a strong staff and quality environment (Clifford et al., 2005)

Current Efforts to Monitor and Assess Quality of Preschools

Previous investigations and studies have found evidence that preschool is indeed beneficial to long-term student achievement. Increased understanding that early childhood programs are playing a significant role in later school success (Gormley, Phillips, & Gayer, 2008) has caused vast development of early education programs both public and private. Noteworthy efforts have been made at both the state and national levels in both research and policy to support and improve readiness for school (Barnett et al., 2007). In 2000, when the National Education Goals Panel emphasized school readiness as one of the eight National Education Goals, there was a realization of the importance and need for preschools. It was also recognized that there needed to be a way to monitor the quality of those schools. Available literature on the subject of quality

assessment suggests that there are several ways to assess the quality of a preschool and the program it offers (Fiene, 2003; Galinsky, 2006; Rous, McCormick, Gooden, & Townley, 2007). The study by Rous et al. (2007) refers to the perspectives of assessment as a top-down perspective, a bottom-up perspective, an outside/inside perspective, inside perspective, and community perspective. A look at each of these individual perspectives follows.

The first to be reviewed is the top-down perspective. The top-down perspective on quality typically examines selected physical features of the program such as the ratio of adults to children, the qualifications and stability of the staff, the quality and quantity of equipment and materials, the quality and quantity of space per child, and the program's provisions for health, hygiene, and fire safety. According to Fiene (2003), these elements are typically mentioned in licensing guidelines and are useful for evaluating quality in that they are directly observable and can be regulated. Fiene (2003) stated that research has shown programs with high scores on these indicators of quality are associated with children who have greater social competence, higher levels of language development, higher developmental levels of play, and better ability to regulate their behavior. Espinosa (2002) noted in research that when preschools incorporate a curriculum with specified goals, set expected outcomes, and assessment procedures, the program is more likely to be successful. Espinosa also stated that children learn better in spacious, well-equipped classrooms that are supplied with age-appropriate materials for art, music, science, language, mathematics, dramatic play, and building materials (Espinosa, 2002).

The second is the bottom-up perspective. Although the concrete variables conventionally included in research on early childhood programs have some predictive power for average and overall effects, a more reliable and more accurate predictor of a program's effects on children's growth, development, and learning is the day-to-day quality of life experienced by each child. By investigating the idea that the child's experiences in the program are the true predictor of its effects (Sandberg & Eriksson, 2010), meaningful assessments concerning the quality of a program should determine how the child experiences and reacts to the environment and interactions in the classroom. According to Espinosa (2002), materials and activities should be individualized and challenging to students. Age-appropriate assessments for progress should take place on a regular basis and be documented and any special learning needs noted and addressed. Children should be allowed to choose from a variety of activities and participate in individual, small-group, and large-group activities. Students should be given many opportunities to learn the basic school readiness skills including alphabetic principles, phonological awareness, mathematical concepts, and scientific thinking, but should also learn the social and self-regulation skills through positive adult guidance (Espinosa, 2002). The indicators of quality implied by the child's experiences are based on current understanding of the influences on children's long-term growth, development, and learning. Every child should feel welcome, that he or she belongs in the group and that he or she is accepted, understood, safe in the school environment, and protected by

those in charge. They also need to feel intellectually engaged and respected (Sandberg & Eriksson, 2010).

The third idea of perception is the outside-inside perspective. This method of judging the quality of a program could be based in part on how the parents perceive the program and what it offers to them and their children. Parents should be concerned not only about their children's experiences, but also with the quality of their own relationships with the staff. Espinosa (2002) stated that parents and family members should be welcomed into the program and included as partners in all aspects of the educational process. Parents ought to feel comfortable voicing concerns and contributing to the creation, and changing of policies involving the preschool. There should be opportunities for growth within the family, as well as through educational and parenting classes (Espinosa, 2002). A parent should feel that his or her child is safe and comfortable with the staff, that the child is respected, and that the preschool is concerned with and devoted to all students' development and learning. The relationship between parents and staff should be respectful and friendly and should encourage ongoing communication between home and school (Katz, 1994). Parents are more likely to appreciate and commend the quality of a preschool if they can communicate with their children's teachers in positive ways and appreciate what teachers are striving to accomplish (Fiene, 2003).

The fourth perspective to be investigated is the inside perspective. This perspective is that of those on the inside of the preschool program, the staff and teachers. They tend to judge the quality of the program on three factors:

relationships between colleagues, staff to parent relationships, and organizational climate. Good quality learning environments for children must involve a healthy working climate for the adults who are employed there. According to Espinosa (2002) teachers should have, at a minimum, a four-year degree and be paid a professional salary with benefits. Teachers should be provided with ongoing professional development and constructive feedback and should be actively supervised. These efforts help to create a climate of trust, respect, and cooperation among all of the employees (Espinosa, 2002). The nurturing of positive, respectful, and supportive communication between teachers and parents of diverse backgrounds requires professionalism based not only on training, but also on experience and personal values. The interactions between the students and teachers should be frequent and meaningful, expanding the children's vocabulary and knowledge through the use of questioning and the encouragement of problem solving (Espinosa, 2002). One of the major influences on the quality of a preschool program is the nature of the general climate of the school (Howes, 2000). The way staff, teachers, parents, and students interact can be the deciding factor in whether or not a preschool functions well and is successful. Good environments and preschool programs are more likely to be created when the adults who teach and work in them are treated well and are content in their jobs. This is to be expected when staff members are treated with respect, valued for their opinions, offered in-service training, and generally appreciated (Wong et al., 2008).

The fifth perspective is that of the community and society in which the preschool functions. The short-term and long-term consequences, that occur when a program fails are felt strongly by the community in which the students live and grow. Similarly, when preschool programs are successful in nurturing a child in the early years, students, families, and the schools they attend will benefit. While a community will reap the benefits of high-quality early childhood education, communities suffer social and other costs when the quality is poor (Schweinhart et al., 2005). It is believed that those who make decisions on behalf of the communities should consider what is needed to enhance the early childhood experience. Communities should make an effort to ensure that resources are available, that the programs are affordable to all, that the working and learning conditions of the programs are acceptable, and that the staff is qualified, trained, and sufficiently paid.

Given all of these different perspectives and ways of evaluating a program, it is possible that the level of satisfaction could vary significantly, even within one program, depending on who is determining the quality and from which perspective they are viewing it. While realizing the conventional measures of evaluation of structural quality and process have limitations, the National Association for the Education of Young Children (NAEYC) has created a vision of what a high quality preschool looks like. The NAEYC program standards and accreditation criteria were updated in 2006 to include explicit program standards for early childhood programs, and the standards were made more evidence-based and aligned with the profession's knowledge of best practice (Jacobson,

2006). There are 10 program standards. Each of the 10 standards falls under a category according to the early childhood education stakeholder. The first section of standards is based on children and focuses on the advancement of children's learning and development:

Standard 1: Relationships

Standard 2: Curriculum

Standard 3: Teaching

Standard 4: Assessment of Child Progress

Standard 5: Health

The focus of the next standard is teachers, including qualifications and professional commitment of the program's staff:

Standard 6: Teachers

The next two standards address the family and community partnerships:

Standard 7: Families

Standard 8: Community Relationships

The last standards are in reference to the program's administration, including the physical environment and leadership:

Standard 9: Physical Environment

Standard 10: Leadership and Management

By addressing each of these standards and meeting the stated requirements, a preschool program will be granted accreditation by the NAEYC. (Jacobson, 2006)

It has been established by previous research that high quality early childhood education programs have a significant impact on improving the cognitive, academic, and social skills of children, especially those most at risk for later school failure (Campbell et al., 2002; Galinsky, 2006; Garces, Thomas, & Currie, 2002; Gilliam & Zigler, 2000). In determining ways to indicate high quality, Mitchell (2005) noted in his article that Quality Rating and Improvement Systems (QRIS) were being developed in many states in order to assess and improve the quality and consistency of early care and education programs and facilities. These rating systems could also be used by parents to determine which schools and programs are of the quality they seek for their children.

In order to consistently monitor and assess the quality of preschools across the nation, the National Institute for Early Childhood Research developed a list consisting of 10 research-based quality standard benchmarks for program features likely to affect the program's capacity to support children's optimal learning and development. Jacobson (2004) discussed the following benchmarks and noted that only one state had met all of the benchmarks. They are as follows:

1. Early learning programs must include a comprehensive curriculum.
2. Teacher degree requirements must be in place and include a statement requiring the lead teacher to have a bachelor's degree at a minimum.
3. The lead teacher must have specialized training in early childhood education and development.

4. The assistant teacher must have a child development associates degree (CDA), another two-year degree, or an equivalent, at minimum.
5. Fifteen hours per year of in-service professional development is required of teachers.
6. Maximum number of children per classroom must be 20 or fewer.
7. Staff-child ratio must be 1:10 or better.
8. Health care screenings or referrals for vision, hearing, and health must be required.
9. Preschools are required to serve at least one meal daily.
10. Regularly scheduled monitoring and site visits must be used to display ongoing adherence to state program standards. (Jacobson, 2004, p. 21)

The primary focus of these rating instruments is the structure of the preschools. Until recently the emphasis on quality early childhood education has focused on structural issues, such as the student-to-teacher ratio and class size. These variables are now monitored in most cases by state licensing regulations and national accreditation systems such as the above-mentioned benchmarks. Galinsky (2006) asserted that there were two structural factors that consistently related to better student progress: better student-to-teacher ratios and more time spent in the early childhood programs. Subsequently, the focus on measurements of quality in early learning has shifted to looking into the process of how the children are taught. The teaching process includes not only the curriculum being used, but also the actual experiences of teachers and students

in classrooms; teacher and child interactions in social, emotional, and instructional areas; and how well the teachers are teaching the content of the curriculum (Harms, Clifford, & Cryer, 2005). Based on a review of the evidence, a committee of the National Research Council recommended that preschool teachers have a bachelor's degree with specialization in early childhood education (Bowman et al., 2001). Although there is very little research on the qualifications of assistant teachers, preschool classrooms are generally taught by a team consisting of a teacher and an assistant in order to keep the staff-to-child ratio consistent with accreditation requirements (Espinosa, 2002). Several studies (Barnett, 2004; Bowman et al., 2001; Burchinal et al., 2002) indicated the importance of certain qualifications and certification for all teaching staff at the early childhood level.

In order to measure process quality, researchers must examine the interactions of teachers and children while in the classroom and focus on how the curriculum content is taught. The National Center for Early Development and Learning found when performing a large-scale study in 2002 of state funded pre-kindergarten programs that when both measures of quality are included, additional findings materialize (Bryant et al., 2002). The investigation presented findings of a multistate sample of publicly funded pre-kindergarten programs. The findings indicated that both the program structural features, such as teacher training, curriculum choices, and classroom size, and the quality of teacher-to-student interaction and classroom atmosphere are statistically significant predictors of observed quality in preschool classrooms (Pianta et al., 2005). The

researchers used not only the Early Childhood Environmental Rating Scale (ECERS), which is used to measure the structural qualities such as the educational level of the teacher, teacher-to-student ratio, class size, and teacher compensation, but also a new measure referred to as the Classroom Assessment Scoring System, which looks at process quality, including the emotional climate of the classroom, classroom management, and academic curriculum in place to support learning and quality feedback (Harms et al., 2005).

Research-Based Preschool Curriculum Currently in Use

A valid research-based curriculum provides what is needed to operate an effective preschool education program. The most effective preschool programs select curricula that are designed to instruct all aspects of early childhood education, including socio-emotional development (Barnett et al., 2008; Galinsky, 2006). Successful programs establish a clear focus of what they want to teach, have clearly defined objectives, help teachers and families know exactly what the program's curriculum is trying to accomplish, and are clear about what skills are being measured (Chambers, 2009; Galinsky, 2006). A program with a strong curriculum makes use of ongoing assessments (Barnett, 2008) and addresses individual differences in order to make adjustments if expectations are not being met (Barnett, 2004; Galinsky, 2006; Ramey & Ramey, 1998). Selection of a curriculum with clear goals and objectives helps establish a clear alignment between goals of the program and strategies. Several widely known early education curriculum models were noted in this study. The following is a brief

review of curricula that respondents reported as what they used in their classrooms.

The A Beka curriculum was developed in 1954 by D. Arlin Horton, president and founder of Pensacola Christian College and Pensacola Christian Academy. This educational curriculum is founded on biblical principles and the concepts of traditional education. The A Beka curriculum, used by many private Christian schools and homeschooling parents, is based on traditional best practices (Laats, 2010). At the preschool level it is a phonics-based program that relies heavily on traditional methodology. The method of delivery is whole-group instruction followed by activities for reinforcement. The "A Beka" curriculum includes language arts, math, and science.

The Big Day for Pre K (2010) curriculum was developed by Dr. Ann Cunningham at the University of California, Berkeley, for Scholastic Corporation. Cunningham is nationally recognized for her research on literacy and early childhood development focusing on the cognitive processes. The Big Day for Pre K program is considered a comprehensive curriculum created from extensive research by Cunningham and her colleagues. It has been aligned to Common Core, State, and Head Start standards, which have been proven to prepare students for kindergarten. The curriculum promotes social-emotional, language and literacy, mathematics, science, and physical development. It was designed to place specific emphasis on oral language development, phonological awareness, alphabet knowledge, mathematics, ongoing assessment, and professional development ("Big Day for PreK", 2010). The content is delivered

by daily small group instruction that provides opportunities for students to be actively involved in learning and developing skills by teacher modeling, guidance, and feedback. A study was conducted by implementing the curriculum in pre-kindergarten classes in Texas. The Scholastic Early Childhood Inventory (SECI) was used to assess students' progress. The SECI tests four key domains: oral language, phonological awareness, alphabet knowledge, and mathematics. These factors are known to be predictive of kindergarten readiness (Benham, 2000). The results of this testing showed that students made significant progress in every domain-oral language, phonological awareness, alphabet knowledge, and mathematics-over the first three months of the year. Students who were taught using the Big Day for Pre K curriculum demonstrated significant increases in the percentages of students achieving the mastery of preschool skills in the areas of language arts and mathematics (Alexander & Block, 2011).

Bright Beginnings is an integrated curriculum that was designed by Tammy Shaw. The curriculum goals for Bright Beginnings are to provide a literacy-focused program that is child centered and addresses the needs of the whole child. It was developed to encompass the areas of language and literacy, mathematics, social and personal development, healthful living, scientific thinking, social studies, creative arts, physical development, and technology. The program encourages teachers to create a classroom environment that is designed to encourage active exploration and interaction with not only other students, but with teachers and materials as well. The curriculum strongly encourages parental involvement. When implemented in pre-kindergarten

classrooms in Tennessee, this program was found to have a nonsignificant positive impact on school readiness and phonological awareness that faded by the spring of kindergarten. Limited effects were noted in language, and no differences were found in mathematical skills in kindergarten (Chambers et al., 2010).

A curriculum specifically geared toward mathematics, Building Blocks-Foundations for Mathematical Thinking, was developed by Douglas Clements and Julie Sarama. The basic approach to this program is using small and whole group lessons to develop mathematic skills. These are explored through many activities such as building blocks, art, songs, and puzzles. The activities in the curriculum are designed based on children's experiences and interests with emphasis placed on the development of mathematical interests. Parents are updated regularly and encouraged to do home-based supplemental activities. (Clements & Sarama, 2007). A study was conducted by Clement and Sarama (2008) comparing the Building Blocks curriculum to both another preschool math curriculum and a control condition. The control classes received teacher-planned math lessons. After a 26-week study the children in the treatment group scored significantly higher than the control groups. (Chambers et al., 2010).

Diane Trister Dodge developed the Creative Curriculum for preschool, which is a comprehensive approach to education for preschool children three to five years of age. It focuses on four areas of development: social-emotional, physical, cognitive, and language development. This approach is geared to helping teachers make their teaching practices consistent with their goals for

children by arranging their classrooms in ways that support developmentally appropriate practices and children's active learning styles. Social competence is a major focal point of this particular curriculum (Dodge, Colker, & Heroman, 2002). Curriculum content is addressed through the 10 interest areas: art, blocks, cooking, computers, house corner, library corner, music and movement, the outdoors, sand and water, and table toys. Students are encouraged to process skills, such as their abilities to observe, explore, and problem solve. Teachers are expected to learn the Creative Curriculum program primarily through self-instruction rather than through training. When Creative Curriculum was implemented in Head Start programs in North Carolina and Georgia, it was found to have a positive impact on overall classroom quality, teacher-child relationships, early literacy instruction, and early language instruction (LoCasale-Crouch et al., 2007).

The Curiosity Corner curriculum was developed in 1986 at Johns Hopkins University by the Success for All Foundation. It is a comprehensive cognitive-developmental program that strives to develop attitudes, skills, and knowledge of preschool students ages three to five (Chambers, 2009). Curiosity Corner consists of 38 weekly thematic units designed to provide a strong foundation in language and literacy, mathematics, science, listening and social skills, creative expression, and positive self-esteem. The curriculum has been aligned with both state and national early learning guidelines and provides training and support to the educators who are implementing the program.

The Doors to Discovery preschool curriculum was developed by McGraw-Hill publishers for use in early childhood settings. It makes use of eight thematic units filled with literacy activities in order to develop literacy success in oral language, phonological awareness, print concepts, alphabet knowledge, writing, and comprehension. Teachers are instructed to teach using specific techniques such as student retelling, think aloud activities, and scaffolding in order to build oral language skills. A partnership is established between home and school through the use of family literacy activities. The primary focus of the curriculum is the development of children's vocabulary and expressive language through a specific learning process called *shared literacy* (Han, Roskos, Christie, Mandzuk, & Vukelich, 2005). Teachers are trained during professional development activities and by using provided resource guidebooks. When this curriculum was implemented in programs in Texas, a positive impact was found in the classrooms on early literacy instruction and early language instruction. The findings showed students in the treatment group had fewer behavioral problems, increased self-regulatory skills, and improved social skills with peers and teachers (Assel, Landry, Swank, & Gunnewig, 2007).

The High Scope Curriculum was developed in the 1960s and 70s by the High Scope Educational Research Foundation staff led by Weikart (Schwienhart & Weikart, 1998) and based on Piaget's constructivist theory of child development (Beatty, 2009). The initial focus of this curriculum was disadvantaged preschool children. The High Scope Curriculum promotes active

learning and classrooms that are well equipped with various areas of interest (Schwienhart & Weikart, 1998). It is expected that each day children participate in a consistent routine that involves students in planning, carrying out, and reflecting on their own learning, while engaging in both small and large group activities. Teachers are expected to organize the classroom environment, establish a consistent daily routine, encourage a supportive social climate, and promote problem solving and verbal reflections. Teachers are responsible for planning small and large group learning experiences and evaluating students using the High Scope methods of assessments relating to key experiences in child development. Schweinhart and Weikart (1998) conducted a comparison of a control group and a High Scope instructed group. At the end of preschool, the High Scope group outscored the control group. Upon follow up at age 23, the High Scope groups had higher grade point averages and were more likely to have attended college (Schweinhart & Weikart, 1998).

The Let's Begin with the Letter People curriculum was developed by Abrams Learning Trends in 1999. According to the developer, over 750,000 children have used the program since it was published. It includes 26 thematic units organized in five teacher resource books. The curriculum contains a classroom floor plan model showing how and where to place the interest centers and meeting circle. It also provides teachers with choices and different options for teaching language, science, math, art, music, social development, and motor skills. Through the interest centers students are able to explore, investigate, and apply knowledge. Hands-on manipulatives and materials are supplied with the

curriculum, as well as books and puppets. Teachers introduce concepts during the meeting circle time and encourage students to explore them further during interest centers and other group activities. When this program was implemented in Head Start and pre-kindergarten programs in Texas, a positive impact was found at the classroom level on classroom quality and early literacy instruction resulting in higher levels of readiness for kindergarten. The positive impact included findings of improved instructional processes and improved classroom emotional climate that yielded substantial improvement in program quality. (Assel et al., 2007).

The Montessori Method was developed in 1897 by Maria Montessori (Kayili & Ari, 2011) while working with disadvantaged children in Italy. This particular method aspires to develop children's socio-emotional health and skills, academic skills, practical life skills, and character. It is one of the oldest early childhood curriculum models and is still in use today by many preschools throughout the world. The classroom settings are carefully prepared by Montessori-trained teachers to encourage children to learn through discovery. Teachers instruct students initially about the proper use and storage of materials; the children are then free to select the materials they will use. Although settings are teacher created, children are encouraged to learn from their own interests and motivation within this curriculum. Results of a longitudinal study of students taught using the Montessori method of instruction showed positive effects in achievement, curiosity, and persistence and positive classroom behavior increased over time, particularly for boys (Miller & Bizzell, 1984). There has also

been research on implementation fidelity in regards to the effectiveness of the Montessori curriculum. Children in schools that implement classic Montessori programs, as compared with children in schools who supplemented Montessori, showed significantly greater school-year gains in mastery of skills in reading, math, vocabulary, and social problem-solving, suggesting that high fidelity Montessori implementation is associated with better outcomes than lower fidelity Montessori programs (Lillard, 2012).

The Open Court curriculum is an early literacy language arts program designed specifically for pre-kindergarten children. First published by McGraw-Hill Publishers in 2003, the program's goals are to teach oral language skills, print awareness, alphabetic principles, and a phonological awareness using a systematic format (Miners, 2007). The curriculum is organized in eight thematic units. Lessons are taught in two large group activities followed by small group activities. Lessons begin with a literature selection and move into phonetic and writing activities. The curriculum includes a home component that encourages families to engage their children in learning activities at home to reinforce what has been taught at school. Open Court also provides a pre-assessment to establish the status of each child and eight unit assessments to monitor student progress. Observational checklists are used during classroom activities to record responses to skills taught in each unit. Children are motivated by the game-like format for the learning activities and the big book format that includes songs and rhymes. The program provides instruction and practice in all major components of early literacy (Bereiter et al., 2002). McRae (2002) evaluated 293 schools in

California that had implemented the Open Court curriculum, comparing them to control schools with similar demographics for three years. Scores showed that schools using the Open Court curriculum out-performed schools that used other curricula by 50% to 75% (McRae, 2002).

The Reading Street curriculum was published in 2008 by Scott Foresman Publishers. It provides systematic high quality instruction that focuses on five critical elements: phonemic awareness, phonics, fluency, vocabulary, and comprehension. The program focuses on the following areas: classroom teaching, comprehension, assessment, motivation, literacy development, intervention, engagement, and technology. The curriculum is designed to help teachers create an interest in reading through motivational and engaging literature. The Reading Street curriculum is scientifically research-based and places strong emphasis on monitoring progress and differentiating instruction (Wilson, Morse, & Dickinson, 2009) and aligns skill instruction at each grade level with the common core standards in order to provide the correct skills at the correct times in each student's educational experience.

The Ready, Set, Leap curriculum was developed at the University of California, Berkeley, and is published by Leapfrog Publishers. It is a comprehensive preschool curriculum that combines research-based instruction with multi-sensory technology. The curriculum is composed of nine thematic units with detailed plans for both large and small groups. It incorporates ongoing informal and formal assessments. This program stresses balance between active and experiential learning, social and emotional development, teacher-child

relationships, and a good home to school connection. Curricula topics include literacy and language development, phonological awareness, alphabet knowledge, print awareness, oral language development, reading aloud, and reading comprehension. The program uses children's books and interactive electronic technology, which allows for multisensory strategies to be implemented (Layzer, Layzer, Goodson, & Price, 2007). The Ready, Set, Leap curriculum was implemented in preschools in New Jersey, and a positive impact on students' mastery of pre-kindergarten skills was noted. At the end of kindergarten, students who had been taught using Ready, Set, Leap outperformed the control group on phonological awareness and literacy measures (Chambers et al., 2010).

The Saxon math curriculum, developed by John Saxon, is a teaching method for incremental learning of mathematics at all grade levels, pre-kindergarten through high school. A new mathematical concept is taught each day, and old concepts are continuously reviewed. In providing a steady review of old material, it is especially helpful to students who struggle to retain previously taught content. Saxon uses an integrated curriculum, teaching and re-teaching skills throughout the entire school year (Saxon, 1982). At the preschool level it works with concepts of shapes, colors, calendar skills, patterns, relational concepts, beginning numerals, beginning money concepts, sorting, and graphing.

The Touch Math curriculum was specifically developed by Janet Bullock to correspond to the motor, cognitive, and developmental abilities of children three to five years of age. The program for preschoolers does not require writing, but

covers counting, numbers, comparing, classifying, sorting, graphing, patterning, identifying, sorting and classifying two-dimensional and three-dimensional shapes, coins, and representing quantities and numbers. Since most preschool children learn effectively when all of their senses are involved, they are able to learn the math concepts in this curriculum as they see, say, hear, and touch (Drawdy & Gaines, 1993).

Training and Professional Development

As the educational objectives for early childhood education change, so does the need for higher quality professional development and support for educators in this field (Ramey & Ramey, 1998; Whitaker, Kinzie, Kraft-Sayre, Mashburn, & Pianta, 2007). Educators and policymakers recognize a need for teacher training in conjunction with the common core standards. Training should include what is expected in preschool classrooms and how to take the guidelines from the common core standards to make a checklist for the early learning years (Rose, 2012). Most agree there is a need for growth in this area. A study by Cusumano, Armstrong, Cohen, and Todd (2006) specifically compared levels of professional development and linked them to child literacy outcomes. Reported results of the study indicated that students in classrooms where teachers were active in participating in professional development had higher results on several literacy assessments than did students of teachers who did not participate in ongoing professional development. The most effective preschool programs have well-trained teachers and staff who were knowledgeable about the goals of the curriculum in use (Barnett et al., 2007; Galinsky, 2006).

In order for a curriculum to be effective and successful, one must recognize the importance of effective training and support of teachers. Teachers are critical factors in the learning process in preschool settings. Questions have been raised as to the best ways for teachers to acquire the knowledge and education they need to most effectively serve the needs in an early childhood environment. In early childhood professional development there is a distinction between education, which is said to take place in the formal academic system, and training, which refers more to on-site programs often held in the preschools themselves (Holland, 2005). Curricula must be combined with teachers' knowledge and theories and then incorporated into their instructional plans, decisions, and actions. Teachers are more likely to implement a curriculum when it is compatible with their own philosophy and if they are receptive to on-going training (Lieber et al., 2009). Reviews by Barnett (2004) on early childhood research investigated the relationship between teacher education and quality preschool education. The research indicated that specialized formal training in early childhood education leads to better results for young learners and higher structural quality in the classrooms. A bachelor's degree and specialized early childhood training at the college level indicate the formal training. Students who are instructed by teachers who are well trained and receive ongoing professional development tend to make stronger educational gains in the preschool years (Barnett, 2008; Chambers et al., 2010; Galinsky, 2006). It is important to implement the curriculum the way the researchers intended it to be implemented. Implementing a curriculum as it was intended is referred to as implementation

fidelity, and children tend to make better educational gains when teacher fully implement the curriculum (Hamre et al., 2010; Wasik, Bond, & Hindman, 2006). In order for teachers to be effective, Zaslow and Martinez-Beck (2005) suggested that researchers and teachers be paired and training courses be credit bearing, implementing more web-based resources, and make instructional supports more readily available. Pianta et al. (2005) have developed new resources in the form of a web-based tool similar to a palm pilot or other personal digital assistant. This would allow teachers to not only receive web-based training, but it would also provide teachers with the ability to access personalized consultation while implementing curriculum (Early et al., 2001).

Monitoring and Observation of Teachers

In order to ensure that quality education is being delivered, the administrator must be consistent in observation and evaluation of the process and delivery of the curriculum by the teacher. Literature suggests that providing constructive feedback after observing teachers can be helpful not only in promoting growth and change, but also in the implementation of curriculum to its fullest extent and use. Individualized meetings and regular feedback are most effective in improving preschool teachers' effective use of a research-based curriculum (Hamre et al., 2010; Wasik et al., 2006). Feeney (2007) suggests that the quality of the feedback offered to teachers can achieve a more significant impact on student learning and encourage professional growth among teachers. Constructive feedback should be based on an established rubric, which will then lead to specific recommendations for improved instruction, better use of curricula,

and more self-directed inquiry (Feeney, 2007). Teacher observation and evaluation is important for two reasons, according to Glickman (2002): they provide quality assurance and stimulate professional learning and growth. Glickman (2002) stated that there must be a clear purpose to the evaluations with the goal being to maintain a high level of quality instruction and to provide constructive feedback to encourage teachers' professional growth. Glickman (2002) stated that the teacher evaluation helps to provide a forum, structure, and a plan for the teachers and administrators to assess professional practices, reflect, and change when needed. Although there are many factors that are important to student learning including but not limited to curriculum programs, assessment tools, and funding, it is absolutely the quality of instructional practices provided by teachers that produces a better education for students (Darling-Hammond, 2002). Glickman (2002) stated that a teacher's main duty is to ensure that learning takes place. In order to ensure that a curriculum is being taught, continual observation and supervision by an administrator is useful and even necessary. The principal is expected to take the lead in creating a mutually respectful atmosphere where the supervisors and teachers work together to achieve a positive learning experience.

The benefits of observation and supervision are many, according to Glickman (2002). Not only does active observation and supervision provide consistent feedback to the teachers, but these observations also allow for immediate diagnosis of instructional problems, development of new teaching strategies, improved instruction, improved classroom management, improved student

motivation, and a better learning atmosphere. Supervision can be a determining factor in student achievement, so before assessing students one must assess the teacher and learning environment in which the student is studying.

Student Assessment and Progress

The movement to more formal preschools has created expectations that the preschools that students attend will teach them appropriate behavior, communication skills, certain academic abilities, and the ability to take care of their own physical needs (Early et al., 2001). By assessing preschoolers for readiness, information can be gained on how to better prepare students to enter school ready to learn and, therefore, lend to their future success as students. After assessing the preschools and programs for level of quality, integrity of curriculum, planning, and teaching, the focus should then turn to assessment and evaluation of individual students. In order to improve long-term academic outcomes, increased attention needs to be given to supporting and assessing school readiness and identifying successful, evidence-based programs in early childhood that can ensure a more even start at school entry. Over time, cognitive development has become the only thing administrators and policy makers outside of the classroom take note of, perhaps because it is the most easily measured. Most assessments for preschoolers focus primarily on cognitive development. The pressure to measure a teacher's effectiveness through children's performance on standardized tests changes not only how teachers teach and what children study, but also seems to be altering educators understanding of the nature of how children actually learn the most effectively

(Gormley et al., 2008). So much focus on the results of these assessments can distort the perception of what should be happening in a classroom. Assessment is an important aspect of preschool, but it should be performed in developmentally appropriate ways and in a manner that assesses all aspects of a preschool education.

A study conducted by Dominguez et al. (2010) discussed the growth of learning behavior among Head Start children and the lack of equality in the individual preschool classrooms. The study provides more evidence that a preschool education actually does prepare children for more success upon entry into school. Research has proven the benefits of preschool education for improving achievement and for narrowing the gap between ethnic and income groups. Although most states now provide funding for preschool programs, not all preschool programs or classrooms are equal. There must be reliable assessments of classroom processes and some way of regulating what curriculum is used. This study sought to define classroom quality in terms of interaction between the teacher and students while teaching and learning are taking place, rather than just the more structural aspects such as teacher-student ratios and teacher certification. Dominguez et al. (2010) examined children's rate of growth in learning behaviors and determined whether it is due to the children or to the differences between classrooms. Dominguez et al. (2010) defined learning behaviors as "behaviors, skills, dispositions, and attitudes that describe the way in which children approach or react to learning situations" (p. 31).

This study by Domínguez et al. (2010) is representative of a new generation of research and a new way of viewing teaching and learning practices. It seeks to define classroom quality and instructional practices in terms of teacher-student interactions rather than structural characteristics of classrooms such as teacher-to-student ratios or teacher education and certification. They conducted the study first with a large sample of Head Start children, and then using a smaller sample of Head Start Children, Dominguez et al. (2010) scrutinized the deviation in students' baseline levels and their rates of growth in learning behaviors. They attributed these variations to differences in classroom organization, teaching methods, and choices of curriculum in place.

In June 2010 national leaders released the Common Core Standards. This was a bold step toward more clearly defining college readiness standards for math and literacy in the K-12 education world. As states transition to the common core expectations of quality and curriculum in children's earliest educational experiences, it is an optimal time to define *quality* in preschool and promote continuity and sharing among early childhood educators and their kindergarten through grade twelve counterparts (Rose, 2012). This move is causing states to reassess how the Early Learning Guidelines align with their expectations for the development in the early elementary years. These guidelines are not currently intended as an assessment tool, but as an instrument to help early care and educational providers select methods and assessment instruments that are appropriate for the young students at different stages of development. According to National Institute for Early Education Research, there

are currently only seven states that conduct a school readiness assessment and track children as ready for school, in progress, or not ready for school. These assessments are based primarily on teachers' observations of students' skills and abilities in all areas of development in whole group situations. Most of these states use an assessment instrument that has been designed by the state or one that has been adapted to their needs.

Summary

While preschool administrators must consider content of curriculum models available, the process through which it is delivered and the classroom climate are also of great importance. With the goal being to improve children's long-term success by enhancing early childhood skills and knowledge, all aspects should be considered. Although preschool curriculum models do vary in content and presentation, research strongly suggests that a pre-kindergarten classroom teacher using a planned, research-based curriculum has a more positive impact on student learning outcomes than does a pre-kindergarten classroom teacher with no set curriculum (National Research Council, 2000).

Research on brain development and the impact of preschool experiences makes it clear that children who have been nurtured to develop strong social, emotional, and behavioral skills are more successful in the classroom. A strong curriculum should address not only the academic aspects of what is expected in preschool, but also the social and regulatory skills (Knitzer, 2007). Knitzer (2007) claimed that teaching children to interact in a positive manner with both their classmates and teachers, be enthusiastic learners, be willing to engage in

challenging subject matter, and manage their impulse control are all key components of school success and of a strong curriculum.

While there are strong opinions about both child-centered and direct instruction, many researchers are looking more and more towards the kind and quality of instructional interactions that teachers have with their students. According to Hamre and Pianta (2005), new evidence suggests that focused, direct, intentional interactions that are based on feedback and student performance have the greatest value for increasing student achievement. They further emphasized that these interactions are not to be confused with what has been referred to as *drill and kill* approaches, as those approaches have not been found to be effective and do not actively engage children in the learning process. On this same note, it is important to realize that a curriculum itself, however rich in activities and conceptual understanding of how young children learn, is simply a tool to the teacher using it. Even the very best curriculum can be poorly implemented, especially if a teacher has not been properly trained and offered support. The selection, training, implementation, monitoring, and assessment of a curriculum are all instrumental in the creation of a successful preschool program.

CHAPTER III

METHODOLOGY

Overview

The purpose of this study was to determine if public and private preschools in Mississippi were making use of a planned research-based curriculum and the effect it may or may not have on students' mastery of skills in preschool classrooms. The study also investigated the training and monitoring provided to teachers before and during teaching the selected curriculum and how that may or may not have impacted student mastery of skills. The qualitative portion of this study gathered data about the demographic information regarding the teachers and students. The qualitative demographic information was used to report information regarding teachers' qualifications, student population, and whether the school was public or private. Eight Hypotheses were proposed for the quantitative portion of the study and were used to assess the effect each curriculum had on student progress. The information gathered about curricula currently available and in use by the preschools in this study will be beneficial in determining whether using a research-based curriculum or teacher-planned curriculum is the most effective method of helping students master the skills needed to be ready to enter kindergarten.

Research Design

The study used a mixed-method design. In the first section of the survey instrument, qualitative methods were used to describe the teacher completing the survey, the students being taught, and whether the school was public or private.

The rest of the survey was a quantitative research design. The information gathered determined which curriculum models are used in public and private preschools in the State of Mississippi and what impact those curriculum models have on student progress. A survey was created by the researcher, and approval was granted by the Internal Review Board of The University of Southern Mississippi (Appendix A). After receiving a signed letter of permission from Jackson County Excel by 5 (Appendix B), a pilot study was conducted. Preschools were then selected from a listing of public and private preschools in Mississippi on the GlobalScholar Preschool Finder website. By using a proportional selection method, 400 preschools were selected. The surveys were then packaged and mailed to 400 public and private preschools throughout the State of Mississippi via the U. S. Postal Service. Fifteen surveys were distributed by hand to preschools in Jackson County. Upon completion of the surveys, the participants returned them in the stamped, self-addressed envelopes included in the packet. After receiving 108 completed surveys, it was determined that 74 surveys were completed by teachers and 32 surveys were completed by administrators. The remaining two were completed by assistant teachers. The surveys completed by teachers and administrators were entered into the SPSS statistical software in preparation for the Hypotheses to be tested.

Research Questions

There has been a great deal of focus on what aspects of preschool are helpful to long-term student achievement and what constitutes an effective

preschool program. The factors explored in this research are related to preschool curriculum in the areas of language arts, mathematics, and science.

1. Does the teacher using a selected research-based curriculum in the area of language arts report improved mastery of skills as compared to teachers who use a teacher-planned curriculum?
2. Does the teacher using a selected research-based curriculum in the area of mathematics report improved mastery of skills as compared to teachers who use a teacher-planned curriculum?
3. Does the teacher using a selected research-based curriculum in the area of science report improved mastery of skills as compared to teachers who use a teacher-planned curriculum?
4. Does the teacher using teacher-planned curriculum report improved mastery of skills as compared to teachers that use a research-based curriculum?
5. Is there a relationship between mastery of skills by students and the full use of furnished curriculum components by teachers who implement a research-based curriculum?
6. Do teachers who have received training and support throughout the year in teaching the planned curriculum report improved student mastery of skills?
7. Does monitoring and observation of teaching the curriculum have an effect on reported students' mastery of skills?

8. Does the level of teacher certification make a difference in students' mastery of skills?

The research conducted was helpful in providing information to answer these questions regarding the use of research-based curriculum, the components included, and the training and monitoring of teachers. The study also addressed the use of teacher-planned curriculum and its effect on student progress.

Hypotheses

Based on the research questions, these hypotheses were tested using the data collected:

$H0_1$: There is not a statistical difference in mastery of skills in the area of language arts development when teachers implement a research-based curriculum as compared to teachers who implement a teacher-planned curriculum in language arts.

$H0_2$: There is not a statistical difference in mastery of skills in the area of mathematical development when teachers implement a research-based curriculum as compared to teachers who implement a teacher-planned curriculum in mathematics.

$H0_3$: There is not a statistical difference in mastery of skills in the area of scientific development when teachers implement a planned curriculum in science as compared to teachers who implement a teacher-planned curriculum.

$H0_4$: There is not a statistical difference in mastery of skills in the areas of language, mathematic, or science when teachers implement

teacher-planned curriculum as compared to teachers who implement research-based curriculum.

$H0_5$: The percentage of components of the curriculum put to use by the teacher has no statistical impact on students' mastery of skills.

$H0_6$: The training of teachers in the selected curriculum does not have a statistical impact on students' mastery of skills.

$H0_7$: The monitoring of and planning by teachers while teaching the planned curriculum does not have a statistical impact on students' mastery of skills.

$H0_8$: The teachers' certification has no impact on students' mastery of skills.

Participants

The participants in this research study were 106 administrators and/or teachers in preschools throughout the State of Mississippi. Surveys were distributed by mail to preschools that were selected from listings on the Global Scholar website on the Internet. They were also administered to *Excel by 5* preschool participants in Jackson County in South Mississippi. The preschools were both public and private institutions with varying degrees of teacher qualifications being accepted. The sample included an administrator or teacher of four-year-old children with only one survey being completed per school.

Instrumentation

The researcher developed a survey instrument titled *Preschool Curriculum Survey* (Appendix C) to be completed, one per school, by preschool administrators or teachers. The survey includes several demographic questions in reference to gender, age, position held, degree earned, teaching certification, total number of years of experience teaching, public or private school, and race of the student population. The majority of this information was used to report the demographics from the preschool survey, with one question regarding teacher certification measured. Teacher certification was scored from 1 to 5: 1 indicated no certification, 2 indicated a Child Development Associates Degree, 3 indicated state certification, 4 indicated an "alternate route" certification, and 5 indicated "other."

The second section of the survey, *Curriculum Questions*, consists of 11 questions and gathered information regarding whether there was a research-based curriculum in use in the areas of language arts, mathematics, and science. The *Curriculum Questions* were given a score of 1 or 2 based on the yes responses receiving 1, and the no responses receiving a score of 2. Part B of questions 1, 2, and 3 was included to gather the information of the specific researched curricula in use in preschools currently. Part C of these questions addressed the use of the components sold with the curriculum. The answers to part C questions were given a score of 1 to 4. Those using 0-25% of the components sold with the curriculum received 1; those using 26-50% of the components received 2; those using 51-75% of the components received 3;

finally and those using 76-100% of the components received a score of 4. The last two questions of the *Curriculum Questions*, questions 4a and 4b, inquired about planning using other resources by preschools that chose to use teacher-planned curriculum, with part B of that question inquiring as to what resources were used for planning. Question 4a was given a score of 1 or 2, the yes responses received 1, and the no responses received 2. Question 4b was qualitative in nature and gathered information as to what was used to plan when no researched-based curriculum was in place.

The third section of the survey was titled *Training and Support Questions* and consisted of 11 questions. The purpose of this section, questions 5-15, was to provide the researcher with the necessary data to determine if the participants received training and support before and while teaching the curriculum implemented by the school. Questions 5a through 5d and questions 12a through 12d pertained to the initial training for teaching of the curriculum and who provided that training. These questions received a score of a 1 or 2. If there was no training offered, the score was 1 for a yes response and 2 for a no response. If the textbook company provided training, the score was a 1 for yes or 2 for no. If provided by school administrators, the score was a 1 for yes, or 2 for no, and if provided by fellow teachers, the score was a 1 for yes or 2 for no. The scores for these two questions were evaluated separately in this section to provide an answer as to who provided the training. The remainder of the questions in this section are about the frequency of training and support offered. These questions were given a score of 4 to 0. A score of 4 indicated that the training or support

took place weekly, a 3 indicated the action happened monthly, a 2 indicated bi-annual occurrences, a score of 1 indicated annually, and a 0 stated that the training or support in question never happened. The questions were all on the subject of training, how it was delivered, and ongoing support from the teaching peers, administration, and the curriculum company itself. The *Training and Support* section was totaled and given a final score ranging from 0 to 11, with a higher score indicting higher levels of training and support given.

The third section of the survey is *Planning and Monitoring*. It consists of 10 questions in reference to the planning of the curriculum and monitoring of teachers while teaching the curriculum. Questions 16 through 25, about observations and planning, were given a score of 0 to 5. A score of 5 indicated daily observations or planning actions, 4 indicated weekly occurrences, 3 indicated monthly, 2 stated that the planning or observation action being questioned happened only bi-annually, 1 if annually, and a score of 0 if the action never occurred. The entire section was then totaled and averaged and given a score from 0 to 10, with a higher score indicating more frequent observation and better planning practices.

The final section of the survey, *Student Progress Questions*, was divided into three sections. This section of the survey was developed based on the Mississippi Pre-Kindergarten Curriculum Benchmarks for four-year-old children. The first section, labeled *Language Development*, consisted of five questions assessing language development skills. These questions were answered based on the percentage of students mastering the skills by the end of the school year.

They were scored from 1 to 5. A score of 1 indicated 0-20% of students mastered the skill, 2 indicated 21-40% of students mastered the skill, 3 indicated 41-60% of students mastered the skill, 4 indicated 61-80% of students mastered the skill, and 5 indicated 81-100% of students mastered the skill. The scores were then totaled and averaged, and a final score of 1 to 5 was given for the section. A score of 1 indicated a low level of mastery and 5 indicated a high level of mastery. The second section, *Mathematical Development,* consisted of six questions assessing mathematical development skills. These questions were answered based on the percentage of students mastering the skills by the end of the school year. They were scored from 1 to 5. A score of 1 indicated 0-20% of students mastered the skill, 2 indicated 21-40% of students mastered the skill, 3 indicated 41-60% of students mastered the skill, 4 indicated 61-80% of students mastered the skill, and 5 indicated 81-100% of students mastered the skill. The scores were then totaled and averaged and a final score of 1 to 5 was given for the section; a score of 1 indicates a low level of mastery and 5 indicating a high level of mastery. The final section of *Student Progress* is *Scientific Development.* It consisted of four questions assessing scientific development skills. These questions were answered based on the percentage of students mastering the skills by the end of the school year. They were scored from 1 to 5. A score of 1 indicated 0-20% of students mastered the skill, 2 indicated 21-40% of students mastered the skill, 3 indicated 41-60% of students mastered the skill, 4 indicated 61-80% of students mastered the skill, and 5 indicated 81-100% of students mastered the skill. The scores were then totaled and averaged and a final score

of 1 to 5 was given for the section, with 1 indicating a low level of mastery and 5 indicating a high level of mastery.

Procedures

The survey used to gather information was developed by the researcher in order to obtain information from public and private preschools throughout the State of Mississippi. It is 40 questions in reference to curriculum use, training, monitoring, support, and assessment of student achievement. While the majority of the information gathered was quantitative, there were several questions of a qualitative nature used to gather information in regard to the different curricula in use. After being reviewed by a panel of experts, and having gained approval from The University of Southern Mississippi Internal Review Board (Appendix A), the pilot study was conducted. A pilot study was conducted by distributing 12 surveys to preschools within Jackson County, Mississippi. It was used to establish internal consistency and face and content validity of the survey questions by using the Cronbach's alpha test of coefficient reliability. The .70 requirement was used to establish reliability in this study. The Cronbach's alphas were as follows: training questions, .732; monitoring questions, .836; language student progress questions, .948; mathematics student progress questions, .957; and science student progress questions, .954. The survey was distributed by mail to public and private preschools throughout the state of Mississippi and by hand to *Excel by 5* participants in Jackson County. A cover letter assured participants of anonymity (Appendix D). The participants were asked to complete the surveys and return them in a self-addressed stamped

envelope. The data included information on demographics of the school, teacher/administrator completing the form, and the student population attending the preschool. The rest of the survey covered use of curriculum, type of curriculum, training, monitoring and support practices, and student progress. Data from the survey were entered into SPSS for analyses. The analyses concluded whether there is a statistically significant correlation between the use of research-based curriculum as opposed to teacher-planned curriculum, types of curriculum used, and student progress. Analyses were also conducted to determine whether the teacher certification variable had an impact on the effectiveness of curriculum on student learning and whether training and monitoring of teachers lead to more success of curriculum use and the student progress in those programs.

Data Analysis

After entering the data into SPSS, a *t*-test analysis was conducted on the data gathered for the first four Hypotheses, and a Pearson's correlation analysis was run on the data for the last four Hypotheses to determine if any of the predictors had a statistically significant effect on student progress. A one-way ANOVA comparing the impact of teacher certification on student progress was computed. The data were used to determine if the types of curricula used or the training and monitoring of teachers before and while using the curriculum had a statistically significant effect on the students' progress, which in this study included language, mathematics and scientific development. The teacher

certification data were used to determine if the certification held by the teacher of the program had an impact on student progress.

CHAPTER IV

RESULTS

Introduction

This chapter describes the descriptive data and statistical findings of this study. The main purpose of this study was to evaluate whether a relationship exists between the use of a research-based planned curriculum in preschool and students' mastery of skills. The study also gathered data to determine if the use of all components furnished with the curriculum, training and monitoring of teachers before and while teaching the curriculum, and teacher certification made a difference in student growth and progress.

Description of Respondents

Four hundred surveys were distributed to preschools across the State of Mississippi. An additional 15 were distributed in Jackson County to participants in the *Excel by 5* program. One hundred six completed surveys were returned from various preschools. This represented a 26% survey return rate.

Seventy-four surveys were completed by teachers who were predominantly female (97%). Thirty-two surveys were completed by administrators who were for the most part female (81%) and just 18% male. The ages of the teachers fell mainly in the ranges from 26 to 35 years of age (36.5%) and 36 to 45 years of age (37.8%). The majority of the administrators responding were 46 years and older (53%) or in the 36 to 45 year range (34%) as indicated in Table 1.

Table 1

Gender, Age, and Classification of Respondents

	Teacher		Administrator	
	Frequency	Percentage	Frequency	Percentage
Gender				
Male	2	2.7	6	18.8
Female	72	97.3	26	81.2
Age				
22-25	9	12.2	0	
26-35	27	36.5	4	12.5
36-45	28	37.8	11	34.4
46+	10	13.5	17	53.1

The participants responding had varying degrees, certification, and experience. Table 2 illustrates that the majority of the teacher participants had earned a bachelor's degree (35%), followed by associate degrees (35.6%) and high school diplomas (24.7%). Of the administrators responding, 47% had earned a bachelor's degree. Most teacher participants held state teaching certifications (36.5%) or CDA certification (32.4%), while 27% were working with no certification. Of the administrators responding, 40.6% held a state teaching certification and 25% had earned a child development associate's degree.

Table 2

Degree and Certification of Respondents

	Teacher		Administrator	
	Frequency	Percentage	Frequency	Percentage
Degree				
High School	18	24.7	3	9.4
Associates	26	35.6	11	34.4
Bachelors	26	35.6	15	46.9
Masters	3	4.1	3	9.4
Certification				
No Certification	20	27	4	12.5
Child Dev. Ass.	24	32.4	8	25
State Cert.	27	36.5	13	40.6
Alt. Route	1	1.4	3	9.4

Table 3 illustrates that the majority of the teacher participants completing the survey had three to 10 years of experience (47.9%), and administrators mostly fell into this category, as well, with 50% of them reporting three to 10 years of experience and 43.8% reporting 10 years plus. The schools represented in the study were closely divided between public (44.3%) and private (53.8%).

Table 3

Years of Experience

	Teacher		Administrator	
	Frequency	Percentage	Frequency	Percentage
Experience				
Less than 1 year	2	2.7	0	0
1 – 3 years	21	28.8	2	6.2
3 – 10 years	35	37.9	16	50
10 + years	15	20.5	14	43.8

Table 4 represents the dynamics of the student population of the preschools participating in the study. The majority of the students were equally divided between Caucasian (33.3%), and African American (33.3%) with 76 to 100% of the students falling into those categories. Hispanics (15.7%) and Asians (4.6%) accounted for far less of the student population.

Table 4

Student Population

	Teacher		Administrator	
	Frequency	Percentage	Frequency	Percentage
Caucasian				
0-25%	21	30.4	8	27.6
26-50%	16	23.2	3	10.3
51-75%	8	11.6	6	20.7
76-100%	24	34.8	12	41.4
African American				
0-25%	18	28.1	10	37
26-50%	14	21.9	7	25.9
51-75%	10	15.6	3	11.1
76-100%	22	34.4	7	25.9
Hispanic				
0-25%	8	100	9	100
Asian				
0-25%	3	100	2	100
Other				
0-25%	1	100	2	100

Results

The teacher participants' responses are reported in the results. Teachers responded that 50% of preschools participating in the study used a language arts curriculum and that, of the curriculum selected, Letter People (19.5%), A Beka (17.1%), and Open Court (17.1%) were most often chosen (Table 5). The participants reported that those who did use a research-based curriculum in language arts most (78.4%) made use of 76 to 100% of the components furnished with that curriculum.

Table 5

Use of Language Arts Curriculum (N=74)

	Frequency	Percent
Curriculum Used		
Other	7	17.1
A Beka	7	17.1
Building Blocks	0	0
Creative Curriculum	1	2.4
HighScope	0	0
Montessorri	2	4.9
Open Court	7	17.1
Reading Street	2	4.9
Curiosity Corner	2	4.9
Letter People	8	19.5

Table 5 (continued).

	Frequency	Percent
Our Big Day	3	7.3
Bright Beginnings	1	2.4
Ready, Set, Leap	1	2.4
Components Used		
0-25%	1	2.7
26-50%	2	5.4
51-75%	5	13.5
76-100%	29	78.4

Forty-seven percent of teachers participating in the study use a research-based mathematics curriculum, while 52.9% do not. The most often-selected mathematics curriculum is A Beka (16.2%). Of those who implement a curriculum, 68.8% of them use 76% to 100% of the components furnished with that curriculum. Table 6 illustrates which of the available mathematics curriculum are most in use by the participants.

Table 6

Use of Mathematics Curriculum (N=74)

	Frequency	Percent
Curriculum Used		
Other	7	18.9
A Beka	6	16.2
Building Blocks	3	8.1
Creative Curriculum	1	2.7
HighScope	0	0
Montessorri	3	8.1
Curiosity Corner	2	5.4
Our Big Day	3	8.1
Touch Math	3	8.1
Early Child. Express	2	5.4
Ready, Set, Leap	1	2.7
Components Used		
0-25%	0	0
26-50%	3	9.4
51-75%	7	21.9
76-100%	22	68.8

Table 7 indicates that 53% of the teachers responding to the survey do not make use of a research-based science curriculum. Of the preschools that do use

a science curriculum, A Beka (28.6%) was implemented most often followed by Montessori (2.8%) and Our Big Day (2.8%). Of the 53% of preschools that do use a science curriculum, 80% of them make use of all of the components furnished with that curriculum.

Table 7

Use of Science Curriculum (N=74)

	Frequency	Percent
Curriculum Used		
Other	9	42.9
A Beka	6	28.6
Building Blocks	0	0
Creative Curriculum	1	4.8
HighScope	0	0
Montessorri	2	9.5
Our Big Day	2	9.5
Ready, Set, Leap	1	4.8
Components Used		
0-25%	0	0
26-50%	0	0
51-75%	3	20
76-100%	12	80

Of the teachers completing the survey, 62% replied that they use various resources to create their own curriculum and plans. Resource books (33.9%) and Internet resources (32.1%) were most often used to do this.

Table 8

Creation of Curriculum Independently (N=74)

	Frequency	Percent
Yes	62	83.8
No	12	16.2
Resources Used		
Resource Books	19	33.9
State Guidelines	9	16.1
Internet	18	32.1
Other	10	17.9

The next section of the survey inquires about training and support of teachers before and during teaching the selected curriculum. Table 9 illustrates the responses concerning training and educational conference attendance. The responses indicate that while 77% of those surveyed receive no training, of the ones who do receive training, it was offered from textbook publishers (21.6%), school administrators (36.5%), and fellow teachers (51.4%). Most teachers responded that grade level meetings occur monthly (35.1%). The use of webinars is rare, with 56.8% stating that they never make use of these on-line resources. Meetings with fellow educators at the local level take place monthly

for 36.5% and bi-annually for 31.1%. On the state and national levels, 40.5% of teachers attend conferences.

Table 9

Training and Conferences (N=74)

	Frequency	Percent
Grade Level Meetings		
Weekly	11	14.9
Monthly	26	35.1
Bi-Annually	16	21.6
Annually	12	16.2
Never	9	12.2
Webinars		
Weekly	2	2.7
Monthly	2	2.7
Bi-Annually	8	10.8
Annually	20	27
Never	42	56.8
Area Educator Meetings		
Monthly	7	9.5
Bi-Annually	8	10.8
Annually	30	40.5
Never	29	39.2

Table 9 (continued).

	Frequency	Percent
Instructional Conferences		
Monthly	4	5.4
Bi-Annually	27	36.5
Annually	30	40.5
Never	29	39.2
Training		
Weekly	1	1.4
Monthly	13	17.6
Bi-Annually	4	5.4
Annually	35	47.3
Never	21	28.4

Table 10 illustrates 44% of teachers were assigned a mentor teacher. The mentor teachers met with the teachers they were mentoring monthly (31.5%), and offered feedback monthly (24%) and annually (25%). Forty-five percent of the respondents stated that follow up observations never occurred.

Table 10

Mentor Teacher Practices (N=74)

	Frequency	Percent
Mentor Teacher Observations		
Weekly	7	9.6

Table 10 (continued).

	Frequency	Percent
Monthly	31	42.5
Bi-Annually	8	11
Annually	6	8.2
Never	21	28.8
Mentor Teacher Meetings		
Weekly	9	12.2
Monthly	21	28.4
Bi-Annually	13	17.6
Annually	5	6.8
Never	26	35.1
Feedback Offered		
Weekly	0	0
Monthly	16	21.6
Bi-Annually	9	12.2
Annually	22	29.7
Never	27	36.5
Action Plans Implemented		
Monthly	9	12.2
Bi-Annually	6	8.1
Annually	24	32.4
Never	35	47.3

The last aspect of the training section is in reference to support and troubleshooting while teaching the curriculum. Teachers responded that support and troubleshooting services are most often not offered at all, with 98.6% of the respondents stating that it was never available to them. If they did receive any, it was offered by textbook publishing companies (6.8%), school administrators (66.2%), and from fellow teachers (78.4%).

The next section of the survey pertains to monitoring, observation, and planning. Table 11 shows that most all teachers were observed by administration at some point during the year, either monthly (29.7%), bi-annually (29.7%), or annually (25.7%). Peer observations were rarely conducted with most responding never (45.9%), and observation by instructional leaders in the school or district occurred annually (44.6%) or bi-annually (25.7%). Feedback from these observations is most often given monthly (37.8%) or annually (35.1%), and action plans for change are implemented annually (29.7%).

Table 11

Monitoring and Observations (N=74)

	Frequency	Percent
Observation by Administration		
Daily	2	2.7
Weekly	8	10.8
Monthly	22	29.7
Bi-Annually	22	29.7

Table 11 (continued).

	Frequency	Percent
Annually	19	25.7
Never	1	1.4
Peer Observation		
Daily	1	1.4
Weekly	8	10.8
Monthly	19	25.7
Bi-Annually	12	16.2
Annually	34	45.9
Never	0	0
Observation Feedback		
Daily	5	6.8
Weekly	1	1.4
Monthly	28	37.8
Bi-Annually	13	17.6
Annually	26	35.1
Never	1	1.4
Action Plan for Changes		
Daily	1	1.4
Weekly	3	4.1
Monthly	17	23
Bi-Annually	14	18.9

Table 11 (continued).

	Frequency	Percent
Annually	22	29.7
Observation by Instructional Leaders		
Daily	1	1.4
Weekly	4	5.4
Monthly	3	4.1
Bi-Annually	19	25.7
Annually	33	44.6
Never	14	18.9

The planning practices of teachers are displayed in Table 12. Most teachers were required to submit lesson plans weekly (51.4%) or monthly (36.5%) and had planning time with fellow teachers weekly (24.3%) and monthly (32.4%). They often share ideas and teaching strategies on a daily basis (31.1%). Thirty-four percent report that student performance data are never used to adjust plans according to student needs.

Table 12

Planning Practices (N=74)

	Frequency	Percent
Submission of Lesson Plans		
Daily	38	51.4
Weekly	27	36.5
Monthly	3	4.1
Bi-Annually	4	5.4
Annually	2	2.7
Never	0	0
Joint Planning Time		
Daily	15	20.3
Weekly	18	24.3
Monthly	24	32.4
Bi-Annually	4	5.4
Annually	1	1.4
Never	12	16.2
Sharing of Ideas and Teaching		
Daily	23	31.1
Weekly	14	18.9
Monthly	21	18.4
Bi-Annually	10	13.5

Table 12 (continued).

	Frequency	Percent
Annually	3	4.1
Never	3	4.1
Curriculum Mapping		
Daily	4	5.4
Weekly	4	5.4
Monthly	16	21.6
Bi-Annually	35	43.7
Annually	15	20.3

Student progress in Language Arts is depicted in Table 13. Students' recognition of the alphabet letters had the lowest noted progress, with 33.8% of the preschools falling into the 81 to 100% range and 40.5% falling into the 41 to 60% range for success for that question. Fifty-one percent of teachers surveyed responded that 81 to 100% of their students were consistently able to use language to express emotion and ideas. Sixty percent of teachers surveyed responded that 81 to 100% of their students understand and follow instructions, and 55% of teachers replied that 81 to 100% of their students use books appropriately and are able to retell stories.

Table 13

Student Progress in Language Arts (N=74)

	Frequency	Percent
Students use language to express emotion and ideas		
0-20%	0	0
21-40%	0	0
41-60%	13	17.6
61-80%	23	31.1
81-100%	38	51.4
Students use books appropriately		
0-20%	0	0
21-40%	1	1.4
41-60%	5	6.8
61-80%	27	36.5
81-100%	41	55.4
Students retell a story using words		
0-20%	0	0
21-40%	2	2.7
41-60%	5	6.8
61-80%	27	36.5
81-100%	41	55.4

Table 13 (continued).

	Frequency	Percent
Students recognize alphabet letters		
0-20%	0	0
21-40%	8	10.8
41-60%	30	40.5
61-80%	11	14.9
81-100%	25	33.8
Students understand and follow instructions		
0-20%	0	0
21-40%	2	2.7
41-60%	3	4.1
61-80%	25	33.8
81-100%	44	59.5

Student progress in mathematics is noted in Table 14. Sixty-two percent of teachers surveyed responded that 81 to 100% of their students are able to sort objects by color. More the half of the teachers participating placed their students in the 81 to 100% range for success in sorting by size and shape (52.7%), matching objects one to one (52.7%), recognizing simple shapes (50%), and counting from one to 10 (54.1%). Thirty-four percent of teachers stated that 41 to 60% of their students were able to recognize the numbers one to 10 and 37%

said that 81 to 100% of their students could successfully recognize the numbers one through 10.

Table 14

Student Progress in Mathematics (N=74)

	Frequency	Percent
Students are able to sort objects by color		
0-20%	0	0
21-40%	0	0
41-60%	3	4.1
61-80%	26	35.1
81-100%	45	60.8
Students are able to sort objects by size and shape		
0-20%	0	0
21-40%	1	1.4
41-60%	6	8.1
61-80%	28	37.8
81-100%	39	52.7
Students are able to match objects one to one		
0-20%	0	0
21-40%	0	0
41-60%	9	12.2
61-80%	26	35.1
81-100%	39	52.7

Table 14 (continued).

	Frequency	Percent
Students are able to recognize simple shapes		
0-20%	0	0
21-40%	1	1.4
41-60%	22	29.7
61-80%	14	18.9
81-100%	37	50
Students are able to recognize the numbers 1-10		
0-20%	1	1.4
21-40%	8	10.8
41-60%	25	33.8
61-80%	13	17.6
81-100%	27	37.2
Students are able to count from 1-10		
0-20%	0	0
21-40%	0	0
41-60%	9	12.2
61-80%	25	33.8
81-100%	40	51.4

Table 15 shows student progress in science. While 56.8% of the teachers place their students in the 81 to 100% range for recognition of basic colors, less

than half of the teachers surveyed placed their students in the 81 to 100% range for recognizing the five senses (37%), describing animals and their habitats (27%), and describing weather and the characteristics of the seasons (31.1%).

Table 15

Student Progress in Science (N=74)

	Frequency	Percent
Students are able to recognize basic colors		
21-40%	1	1.4
41-60%	8	10.8
61-80%	23	31.1
81-100%	42	56.8
Students are able to name and describe animals and where they live		
21-40%	8	10.8
41-60%	22	29.7
61-80%	24	32.4
81-100%	20	27
Students are able to describe weather and recognize the seasons		
21-40%	2	2.7
41-60%	18	24.3
61-80%	31	41.9
81-100%	23	31.1

Table 15 (continued).

	Frequency	Percent
Students are able to identify the five senses		
0-20%	1	1.4
21-40%	8	10.8
41-60%	16	21.6
61-80%	22	29.7
81-100%	27	36.5

Tests of Hypotheses

A *t*-test was used to measure Hypotheses 1, 2, 3, and 4 to determine if the use of a research-based curriculum had a statistically significant impact on student progress.

Language, Mathematical, and Scientific Development

A *t*-test was used to measure H_1, H_2, and H_3: There is not a statistical difference in student progress in the areas of language, mathematics, and science development in schools that implement a research-based planned curriculum.

The mean scores, in a range from 1 to 5, in schools using a research-based curriculum in language was 4.65 (*SD*=.53), math was 4.85 (*SD*=.32), and in science was 4.75 (*SD*=.28). The mean scores in schools not using a research-based curriculum in language was 3.76 (*SD*=.54), in math 3.86 (*SD*=.59), and in science 3.88 (*SD*=.78). All of these figures are shown in Table 16.

Table 16

Mean and Standard Deviation of Student Scores when a Research-Based Curriculum is Implemented

	n	Mean	Std. Deviation
Language			
Yes	37	4.65	.53
No	37	3.76	.54
Mathematics			
Yes	32	4.85	.32
No	36	3.86	.59
Science			
Yes	15	4.75	.28
No	53	3.88	.78

The results of the independent sample *t* tests in each of the subject areas are as follows. An independent *t* test was conducted comparing student growth and progress between schools that implemented a research-based curriculum and those that did not. The figures indicate a statistically significant positive difference between preschool students' mastery of skills when schools choose to implement a research-based curriculum. This is indicated in language, $t(72)=7.131$, $p<.001$, in mathematics, $t(66)=8.37$, $p<.001$, and in science, $t(66)=4.21$, $p=.001$. Thus, results yielded data to suggest that there is a statistically significant positive difference between the use of a research-based preschool curriculum and students' mastery of skills, leading the researcher to

reject the null Hypotheses 1, 2, and 3, which state there would not be a statistically significant difference between the implementation of a research based curriculum and student mastery of skills.

Schools Using Teacher-Planned Curriculum

A *t* test was used to test H_4: There is not a statistical difference in student progress in the areas of language, mathematics, or science development in schools that implement no research-based curriculum.

An individual *t-t*est was conducted comparing schools that create their own plans and curriculum to student growth and progress. The mean of schools either creating or enhancing their language arts curriculum with other resources was 4.14 (*SD*=.70) in a range of 1 to 5, math was 4.24 (*SD*=.70), and science was 3.93 (*SD*=.81). There was a significant difference in student progress when preschools created their own curriculum in science as opposed to implementing a research-based curriculum in language arts $t(72)=-1.98$, $p=.051$, in math $t(72)=-1.58$, $p=.118$, and in science $t(72)=-2.3$, $p=.024$. Based on these data, displayed in Table 17, the researcher partially rejects the null H_4 due to the fact there is indeed a statistically significant negative difference between student progress in science schools that create their own plans and curriculum and schools that implement a research-based curriculum.

The data collected suggest that the researcher reject null Hypothesis 4 since the creation and planning of preschools' own curriculum does show a statistically significant negative difference on student growth and progress.

Table 17

Mean and Standard Deviation of Student Scores when Teachers Create their Own Curriculum

	n	Mean	Std. Deviation
Language			
Yes	62	4.14	.70
No	12	4.57	.58
Mathematics			
Yes	62	4.24	.70
No	12	4.58	.67
Science			
Yes	62	3.93	.81
No	12	4.5	.61

Use of Components Furnished with Curricula

A Pearson's correlation was used to measure H_5: There is no relationship between students' mastery of skills and the amount of furnished curriculum components used by schools that have implemented a research-based curriculum. A Pearson's correlation was computed between the use of the percentage of the components sold with a research-based curriculum and student progress. The results showed that correlation was not significant in all three subject areas: language, $r(37)=.282$, $p=.091$; math, $r(37)=.933$, $p>.05$; and

science, $r(15)=.152$, $p=.588$. The data led the researcher to retain the null Hypothesis 5 based on the results of the Pearson's correlation.

Training of Teachers

A Pearson's correlation was used to measure H_6: The training of teachers in the selected curriculum does not make a statistical difference in students' mastery of skills. The results showed that correlation was significant in all three subject areas: language, $r(74)=.682$, $p<.001$; math, $r(74)=.662$, $p<.001$; and science, $r(74)=.636$, $p<.001$. The data led the researcher to reject the null Hypothesis 6 due to the fact that there is a significant difference in student progress when teachers have had training and when they have not.

Monitoring of Teachers

A Pearson's correlation was used to measure H_7: The monitoring of and planning by teachers while teaching the planned curriculum does not make a statistical difference in students' mastery of skills. The results showed that correlation was significant, but negative, in all three subject areas: language, $r(74)= -.736$, $p<.001$; math, $r(74)= -.715$, $p<.001$; and science, $r(74)= -.682$, $p<.001$. Despite the significant relationship, the data led the researcher to fail to reject null Hypothesis 7 due to the fact that the correlation showed a statistically significant negative difference.

Teacher Certification

A one-way ANOVA was run to measure $H_{8:}$ The teacher's level of certification makes no statistical difference in students' mastery of skills. A significant difference was noted between students' progress with teachers who

had certification as opposed to those who were taught by teachers who had no certification in language ($F(2,68) = 49.17$, $p < .001$), in mathematics ($F(2,68) = 31.13$ $p < .001$), and in science ($F(2,68) = 21.18$, $p < .001$). These data indicate that students instructed by a teacher with certification in language (M=4.8, SD=.400) had greater student progress than teachers with no certification (M=3.63, SD=.458) and teachers with a two-year CDA certification (M=4.08, SD=.581). These results also indicated that students instructed by a teacher with state certification in mathematics (M=4.82, SD=.441) had greater student progress than teachers with no certification (M=3.63, SD=.458) and teachers with a two-year CDA certification (M=4.417, SD=.627). These data indicated that students instructed by a teacher with state certification in science (M=4.56, SD=.622) had greater student progress than teachers with no certification (M=3.34, SD=.592) and teachers with a two-year CDA certification (M=3.89, SD=.688). In other words, teachers with no certification, or with only two years leading to a CDA certification, had less success, as was evidenced in the progress of their students, than teachers who had state certification.

Ancillary Findings

In addition to the eight Research Questions that were analyzed using the teachers' responses, there were also some additional findings that were noted in this study. In addition to the 74 surveys completed by teachers, there were also 32 surveys completed by administrators. The responses from the administrators indicate a higher percentage of research-based curricula in use. As is indicated in Table 18, administrators reported greater use in language arts (65.6%),

mathematics (64.5%), and science (51.6%) than did teachers who responded yes to use of research-based curriculum in language arts (50%), mathematics (47.1%), and science (22.1%).

Table 18

Administrator Responses to Curriculum Use (N=32)

	Teacher		Administrator	
	Frequency	Percentage	Frequency	Percentage
Language Arts				
Yes	37	50	21	65.6
No	37	50	11	34.4
Mathematics				
Yes	32	47.1	20	64.5
No	36	52.9	11	35.5
Science				
Yes	15	22.1	16	51.6
No	53	77.9	15	48.4

Also noted in the surveys submitted by administrators, was a marked difference in the responses regarding monitoring of teachers. Forty-seven percent of administrators responding stated observation by administration took place on a monthly basis, whereas only 29.7% of teachers responding stated that they were observed by administration on a monthly basis. Observation from

instructional leaders was reported by 31.2% of administrators to occur on a monthly basis, yet only 4.1% of teachers responding stated that observation by instructional leaders took place monthly. According to responses, 37% of teachers received feedback from observations on a monthly basis, but 52% of administrators reported offering feedback from observations on a monthly basis. Finally, while 53% of administrators reported implementing action plans for change after observations, only 23% of the teachers participating stated the action plans were implemented. These differences are illustrated in Table 19.

Table 19

Administrator Responses to Monitoring of Teachers (N=32)

	Teacher		Administrator	
	Frequency	Percentage	Frequency	Percentage
Observation by Administration				
Daily	2	2.7	4	12.5
Weekly	8	10.8	4	12.5
Monthly	22	29.7	15	46.9
Bi-Annually	22	29.7	7	21.9
Annually	19	25.7	2	6.2
Never	1	1.4	0	0
Observation Feedback				
Daily	5	6.8	3	9.4
Weekly	1	1.4	5	15.6

Table 19 (continued).

	Teachers		Administrators	
	Frequency	Percent	Frequency	Percent
Monthly	28	37.8	17	53.1
Bi-Annually	13	17.6	1	3.1
Annually	26	35.1	6	18.8
Never	1	1.4	0	0
Action Plan for Changes				
Daily	1	1.4	2	6.2
Weekly	3	4.1	1	3.1
Monthly	17	23	17	53.1
Bi-Annually	14	18.9	3	9.4
Annually	22	29.7	7	21.9
Never	17	23	2	6.2
Observation by Instructional Leaders				
Daily	1	1.4	2	6.2
Weekly	3	4.1	1	3.1
Monthly	17	23	17	53.1
Bi-Annually	14	18.9	3	9.4

Table 19 (continued).

	Teachers		Administrator	
	Frequency	Percent	Frequency	Percent
Annually	22	29.7	7	21.9
Never	17	23	2	6.2

The differences noted in the responses between the teachers and administrators indicate that while administrators seem to believe they are monitoring closely, the teachers do not feel the same.

Summary

Seventy-four preschool teachers and 32 administrators located throughout the State of Mississippi responded to the survey. The data led the researcher to reject the null Hypotheses 1, 2, and 3 relating to the implementation of a research-based curriculum making a statistically significant difference in student progress, partially reject Hypothesis 4 in regard to the creation and planning of a preschool's own curriculum, Hypothesis 6 referencing the training of teachers, and Hypothesis 8 as to teacher certification. The results of this study indicated a decision to retain the null for Hypothesis 5 pertaining to the use of all of the components furnished with the curriculum. Based on the results, the researcher decided to fail to reject null Hypothesis 7, which was related to monitoring of teachers, due to the statistically significant negative results of the Pearson's correlation. It has been determined that a research-based planned curriculum does improve student growth and progress, that teacher-planned curriculum in

addition to research-based curriculum can be beneficial to student progress, that the use of all of the components furnished with a program does not necessarily make a statistically significant difference, that training and support of teachers before and while teaching the curriculum promotes better mastery of skills for students, and that the employment of certified teachers at the preschool level leads to improved student learning.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Researchers of preschool programs and early literacy have reached the conclusion that there are significant positive effects for children's social, emotional, physical, and academic growth when children attend quality preschool programs (Early et al., 2001; Gormley, Gayer, Phillips, & Dawson, 2005). Effects of preschool programs vary in size and persistence (Barnett, 2008) due to variance of program curriculum (Assel et al., 2007) and method of delivery (Barnett, 2004). As the knowledge and understanding of how young children learn increases (Domínguez et al., 2010), there have been modifications in how curriculum is selected and taught (Klein & Knitzer, 2006). The purpose of this research was to determine if research-based planned curricula were in use and if those models were effective in promoting growth and learning among preschool students. The study sought to determine to what extent the full curriculum was implemented and what impact training, support, and monitoring have on the success of a program. Data were also collected as to teacher certification and was investigated to determine whether or not a teacher being certified had a relationship with students mastering the skills taught in preschool.

Summary of Procedures

A Preschool Curriculum Survey was created by the researcher and approved by the Institutional Review Board (IRB) of The University of Southern Mississippi. After a signed letter of permission was received from Jackson

County *Excel by 5,* a pilot study was conducted. The surveys were distributed, and 106 were returned. The surveys were coded and responses entered into the SPSS statistical software in preparation for the hypotheses to be tested. Upon completion of the statistical testing, analyses were conducted to determine the outcome of each of the hypotheses.

Summary of Major Findings

Below are the research questions, null hypotheses, and findings of the study:

1. Does the teacher using a selected research-based curriculum in the area of language arts report improved mastery of skills as compared to teachers who use a teacher-planned curriculum?

   $H0_1$: There is not a statistical difference in mastery of skills in the area of language arts development when teachers implement a research-based curriculum as compared to teachers who implement a teacher-planned curriculum in language arts.

Results: An independent *t* test was conducted comparing students' mastery of skills when teachers implemented a research-based curriculum in language arts. The figures indicate a statistically significant positive difference between students' mastery of skills when teachers implement a research-based curriculum as compared to teachers planning their own curriculum. Based on the results of the data, the researcher rejected the null hypothesis.

2. Does the teacher using a selected research-based curriculum in the area of mathematics report improved mastery of skills as compared to teachers who use a teacher-planned curriculum?

   $H0_2$: There is not a statistical difference in mastery of skills in the area of mathematical development when teachers implement a research-based curriculum as compared to teachers who implement a teacher-planned curriculum in mathematics.

Results: An independent *t* test was conducted comparing students' mastery of skills when teachers implemented a research-based curriculum in mathematics. The figures indicate a statistically significant positive difference between students' mastery of skills when teachers implement a research-based curriculum as compared to the students' progress of teachers who used a teacher-planned curriculum. Based on the findings, the researcher rejected the null hypothesis.

3. Does the teacher using a selected research-based curriculum in the area of science report improved mastery of skills as compared to teachers who use a teacher-planned curriculum?

   $H0_3$: There is not a statistical difference in mastery of skills in the area of scientific development when teachers implement a planned curriculum in science as compared to teachers who implement a teacher-planned curriculum.

Results: An independent *t* test was conducted comparing students' mastery of skills when teachers implemented a research-based curriculum in science as

compared to teachers planning their own curriculum. The figures indicate a statistically significant positive difference in students' mastery of skills when teachers implement a research-based curriculum as compared to teachers planning their own curriculum. Based on the results of the data, the researcher rejected the null hypothesis.

4. Does the teacher using teacher-planned curriculum report improved mastery of skills as compared to teachers who use a research-based curriculum?

$H0_4$: There is not a statistical difference in mastery of skills in the areas of language, mathematic, or science when teachers implement teacher-planned curriculum as compared to teachers who implement research-based curriculum.

Results: When teachers create their own curriculum as opposed to implementing a research-based curriculum there was a statistically significant negative difference in mastery of skills in science. Based on the results of the data, the researcher partially rejects H_4 due to the fact that there is indeed a statistically significant negative relationship between schools that created their own plans and curriculum in science and students' mastery of skills.

5. Is there a relationship between mastery of skills by students and the full use of furnished curriculum components by teachers who implement a research-based curriculum?

$H0_5$: The percentage of components of the curriculum put to use by the teacher has no statistical impact on students' mastery of skills.

Results: A Pearson's correlation was used to measure H_5 and the percentage of components of the curriculum put to use by the teacher has a statistical impact on students' mastery of skills. A Pearson's correlation was computed between the use of the percentage of the components furnished with a research based curriculum and students' mastery of skills. The results showed that correlation was not significant in all three subject areas: language, math, and science. Based on the results of the data, the researcher retained the null hypothesis.

6. Do teachers who have received training and support throughout the year in teaching the planned curriculum report improved student mastery of skills?

   $H0_6$: The training of teachers in the selected curriculum does not have a statistical impact on student mastery of skills.

Results: A Pearson's correlation was used to measure H_6. The training of teachers in the selected curriculum does have a statically significant impact on students' mastery of skills. The results showed that correlation was significant in all three subject areas: language, math, and science. Based on the data, the researcher rejected the null hypothesis.

7. Does monitoring and observation of teaching the curriculum have an effect on reported students' mastery of skills?

   $H0_7$: The monitoring of and planning by teachers while teaching the planned curriculum does not have a statistical impact on students' mastery of skills.

Results: A Pearson's correlation was used to measure H_7 and it was determined that the monitoring of and planning by teachers while teaching planned curriculum does not have a statically significant impact on students' mastery of skills. The results showed a significant, negative correlation in all three subject areas. Based on the findings the researcher failed to reject the null hypothesis.

8. Does the level of teacher certification make a difference in students' mastery of skills?

$H0_8$: The teachers' certification has no impact on students' mastery of skills.

Results: A one-way ANOVA comparing the impact of teacher certification on student progress was computed. A significant positive difference was noted between students' mastery of skills when teachers had certification as opposed to those who were taught by teachers who had no certification. Based on these findings the researcher rejected the null hypothesis.

Conclusions

The following statements represent conclusions about this sample:

1. The implementation of a research-based curriculum at the preschool level had a significant impact on students' mastery of skills in the subject areas of language arts, mathematics, and science.
2. The use of teacher-planned curriculum for preschool students was not as effective in science as the use of a research-based curriculum.
3. The use of a larger percentage of the components furnished with the curriculum did not have a statistically significant impact on students'

mastery of skills.

4. Students of preschool teachers who received training and ongoing support before and while teaching the curriculum indicated higher mastery of skills than those who received less or no training and support.
5. More frequent monitoring and observation of preschool teachers did not lead to greater student mastery of skills.
6. The level of certification of the instructor teaching the curriculum affects students' mastery of skills. Students of teachers with no certification or only 2 years leading to a CDA certification were less likely to have shown mastery of the preschool skills.

Discussion

Curriculum

While every state has guidelines as to what preschool students should be able to do before kindergarten entry, the development and adoption of the common-core standards puts a major focus on issues of school readiness and the content of those guidelines. Several states, including Mississippi, have already aligned the early learning guidelines to the common-core standards (Zubrzycki, 2011). One factor that plays a significant role in the educational environment of preschools is the selection and implementation of curriculum in pre-kindergarten classrooms. The additional national focus and available research on preschool curriculum (Marshall et al., 2000; Whitehurst, 2004; Wong et al., 2008), has resulted in many new research-based curricula that target not only language, but mathematics, science, and social aspects of this stage of

learning. Many teachers responded in this study that they supplement the research-based curriculum in use with additional materials in order to broaden the learning experience. This study adds to the needed scientific evidence that implementation of research-based curricula does indeed make educationally meaningful differences and a higher level of mastery of pre-kindergarten skills.

Training

Training and professional development activities that support curriculum implementation can also be a significant factor in determining whether or not a particular curriculum can have a significant impact on academic success of students. Extensive training of those who actually teach the curriculum and work with the students is required for programs to be successful (Bowman et al., 2001). Research by Howes (2000) also reported that the success of a program is directly related to the quality of professional development provided for teachers. Even a strong curriculum might not be effective if teachers do not have training and ongoing support within the classroom to ensure that the curriculum in fully and effectively implemented. With budget cuts and lack of funding, professional development is often set aside (Feeney, 2007). Comprehensive training and support could also lend to more complete use of the components included with the program therefore accomplishing better fidelity of implementation.

Monitoring

While the data on monitoring from this study did not indicate that it was helpful in student success, perhaps this is because so few preschools have

effective monitoring practices in place. It would be beneficial for preschool administrators to be fully trained in effective methods of monitoring and observation. Non-degreed administrators who have not necessarily been trained in proper methods of observation currently are directors of many of the public and private preschools. As stated by Glickman (2002), constructive and meaningful feedback is a necessary part of observation in order for teachers to reflect, plan, and achieve growth as a professional. As noted in the ancillary findings, administrators report offering more in terms of monitoring and feedback than teachers report receiving. When administrators provide focused feedback, based on a rubric, that clearly defines the characteristics of effective teaching, a teacher can reflect on current practices and evaluate the effectiveness of the methods being used (Feeney, 2007) and how practices can be changed to improve student learning.

Certification

According to Barnett (2004), better-educated preschool teachers that have received specialized training are more effective. Barnett stated that preschool programs that employ teachers with four-year college degrees have been shown to be more successful. The research presented in this study supports the same. With over half of the respondents to the survey stating that they had a 2-year degree or less, it is apparent that preschools in Mississippi have not reached a point of requiring state certified teachers at the preschool level and that this may affect the quality of the programs available.

Limitations

This study was limited by the lack of opportunity by the researcher to observe the implementation of said curricula and to determine the degree to which all of the content is being used and taught. This study was limited to preschools, public and private, in the state of Mississippi; therefore, the results cannot be generalized beyond the state. Student demographics and socioeconomic status vary greatly among the schools surveyed, possibly limiting the results of the study.

Implications for School Leaders

As many states move toward funding preschool, school administrators need to be aware of the most effective way to educate this age group. This study provides evidence that the traditional method of teacher-planned curriculum still in use by many of the preschools in the state of Mississippi is not the most effective choice to promote students' mastery of skills. As stated by Holland (2005), when selecting a curriculum, administrators should provide appropriate training and follow-up support for teachers in order to achieve the best results from the selected curriculum. Early childhood education needs to focus on all domains of learning, not just reading and math, to assist children in preparing to be successful in kindergarten. There should be some cohesion between what is taught in preschool and what is expected of students in kindergarten (Pianta & Kraft-Sayre, 2003). Preschool has been recognized as an important factor in the educational process, administrators should strive to not only make preschool available to all, but to make every effort to ensure that the curriculum offered is

consistent and helps with preparedness for what is being offered at the kindergarten level and above. As states transition to the Common Core Standards expectations call for standards of quality and curriculum in the early childhood years. This is an excellent opportunity for early educators to define *kindergarten readiness* in order to assist in the transition to elementary school and the realization of a preschool through 20-year-old educational system (Rose, 2012). As stated by early childhood expert Shari Ostrowscher, “What never served early childhood well was when we were seen as a separate entity; you can't have really meaningful early-childhood education and not have it tied to the entire flow of curriculum and what children learn” (Zubrzycki, 2011, p.17). Finally, the results of the study indicate that students whose teachers held a four-year degree were more successful in mastering the skills expected of a preschool student. As more states begin the process of funding preschools, states should consider requiring teachers to have a four-year college degree and specialized early childhood training (Cusumano et al., 2006). New teachers should be trained in college by professionals knowledgeable in early childhood education, and preschools should provide ongoing professional development based on the best practices for teaching young children.

Recommendations for Future Research

Additional research in this field could lead to higher quality preschools. As new curricula are being created, the need for studies on the effectiveness of these programs is increasing.

1. Early childhood education providers in Mississippi range from home-

based care to larger public preschools. Future research should include an on-sight observation process to determine exactly how completely the school is implementing the curriculum and if it is being taught appropriately.

2. Assessment at the preschool level is challenging. Future research should include some method of determining not only the academic achievements of the students, but the social progress as well.
3. Of the preschool curriculum created thus far, many of the programs only include the academic subject areas often limited to language and mathematics. There is a need for preschool curriculum to encompass all areas of education for this stage of development. Some of the newest options on the market have attempted this. Future research should include a look at how comprehensive the program is and how successfully the curriculum addresses the needs of teaching the whole child.

APPENDIX A

IRB APPROVAL

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.6820 | Fax: 601.266.4377 | www.usm.edu/irb

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:
The risks to subjects are minimized.
The risks to subjects are reasonable in relation to the anticipated benefits.
The selection of subjects is equitable.
Informed consent is adequate and appropriately documented.
Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
Appropriate additional safeguards have been included to protect vulnerable subjects.
Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the “Adverse Effect Report Form”.
If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **12030101**
PROJECT TITLE**: Preschool Curriculum: Choices that Promote Learning**
PROJECT TYPE**: New Project**
RESEARCHER/S**: Renee C. Criddle**
COLLEGE/DIVISION**: College of Education & Psychology**
DEPARTMENT: **Educatonal Leadership**
FUNDING AGENCY: **N/A**
IRB COMMITTEE ACTION**: Expedited Review Approval**
PERIOD OF PROJECT APPROVAL: **03/21/2012 to 03/20/2013**

Lawrence A. Hosman, Ph.D.
Institutional Review Board Chair

APPENDIX B

LETTER OF PERMISSION REQUEST

February 15, 2012

Dear Excel by 5 Coordinator,

My name is Renee Criddle, and I am a doctoral student at The University of Southern Mississippi. I have completed my course work and will be conducting research to fulfill the requirements to complete my degree. I am working on a research project entitled *Preschool Curriculum: Choices That Promote Learning.* The purpose of this study is to examine preschool curricula and the training and monitoring of teachers while teaching the selected curriculum.

I am writing to request your permission to conduct this research at your monthly meeting by means of a survey. With your permission, I will coordinate a date and time with the meeting coordinator to distribute and collect the questionnaires. The questionnaire should take no more that 15-20 minutes to complete. All responses will remain completely anonymous and confidential, and no individual participants or schools will be identified. Once the research is complete, I would be happy to share the findings of this project with you.

This study will be reviewed by the Institutional Review Board (IRB), which ensures that research using human subjects follows federal regulations. Any questions or concerns about rights as a research respondent should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-001, (601) 266-6820.

If you choose to grant me permission to survey your teachers, please sign the attached form and return it to me as soon as possible. If you have any questions, please feel free to call or email me. I appreciate your time and assistance in this academic endeavor.

Thank you,

Renee Criddle

rcuret@cableone.net

228) 990-5007

SIGNED LETTER OF PERMISSION

109 Executive Drive, Suite 1
Madison, MS 39110
Fax: 601-707-7727
Phone: 601-707-7726

February 15, 2012

By signing and returning this form, the Excel by 5 coalition agrees to the request by Renee Criddle, a doctoral student at The University of Southern Mississippi, to distribute a survey to gather information to conduct research from early childhood teachers regarding the curriculum being taught in the preschool in which they teach. The Preschool Curriculum survey will be distributed and completed at our monthly meeting in April. The questionnaire will take no more than 15-20 minutes to complete, and all responses will remain completely anonymous and confidential.

[redacted]

Director, Early Beginnings Program
[redacted]

APPENDIX C

Preschool Curriculum Survey

Demographic Information

Gender: ☐ Male ☐ Female

Age: ☐ 18-21 ☐ 22-25 ☐ 25-35 ☐ 35-45 ☐ 45+

Position: ☐ Assistant Teacher ☐ Teacher ☐ Administrator ☐ Other

Degree required of Teachers: ☐ High School ☐ Associates ☐ Bachelors ☐ Masters ☐ Doctorate

Teaching Certification: ☐ None ☐ CDA ☐ State Certification ☐ Alternate Route ☐ other

Total Number of Years Teaching: ☐ Less than 1 yr ☐ 1-3 yrs ☐ 3-10 yrs ☐ 10+ yrs

School: ☐ Public ☐ Private

Student Population: ☐% Caucasian ☐% African American ☐% Hispanic ☐% Asian ☐% Other

Curriculum Questions

1a. Does your preschool currently use a preschool language curriculum?
☐ Yes ☐ No
1b. If yes, indicate which: _____
1c. If using a set curriculum, what percentage of the components that are furnished with it do you use?
☐ 0-25% ☐ 26 – 50% ☐ 51- 75% ☐ 76-100%

2a. Does your preschool currently use a preschool mathematics curriculum?
☐ Yes ☐ No
2b. If yes, indicate which: _____
2c.If using a set curriculum, what percentage of the components that are furnished with it do you use?
☐ 0-25% ☐ 26 – 50% ☐ 51- 75% ☐ 76-100%

3a. Does your preschool currently use a preschool science curriculum?
☐ Yes ☐ No
3b. If yes, indicate which: _____
3c. If using a set curriculum, what percentage of the components that are furnished with it do you use?
☐ 0-25% ☐ 26 – 50% ☐ 51- 75% ☐ 76-100%

4a. Does your preschool create its' own curriculum using other resources?
☐ Yes ☐ No
4b. If yes, what resources are used to do this?_____

Training and Support Questions

5. How does your preschool provide training in use of the selected curriculum? ☐ no training offered ☐ textbook company ☐ school administrators ☐ fellow teachers
6. How often does your preschool have grade level meetings to discuss curriculum matters? ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
7. How often does your preschool participate in training “webinars” online? ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
8. How often do you meet with other area educators on teaching the content of the selected curriculum? ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
9. How often do teachers at your preschool attend state or national instructional conferences? ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
10. Training is available: (check all that apply) ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
11. How often did your assigned mentor teacher observe you through your first year(s) ? ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
12. Support and troubleshooting services are available to you from? (check all that apply) ☐ no training offered ☐ textbook company ☐ school administrators ☐ fellow teachers
13. How often do you meet with you mentor teacher or team leader? ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
14. How often does a trainer or teacher of this curriculum observe and offer feedback on your methods? ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
15. How often were follow up observations conducted for suggested changes for improvement? ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never

Monitoring and Planning Questions

16. How often does your preschool administrator observe classroom instruction? ☐ daily ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
17. How often are you required to submit lesson plans? ☐ daily ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
18. How often does your preschool use peer observations? ☐ daily ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
19. How often do teachers having planning time together? ☐ daily ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
20. How often is there a sharing of ideas and teaching strategies among teachers at your preschool? ☐ daily ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
21. How often do teachers at your preschool collaborate to plan a curriculum map for the year? ☐ daily ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
22. How often is feedback provided after a teacher is observed? ☐ daily ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
23. How often do the teacher and observer work together to then create an action plan to implement changes? ☐ daily ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
24. How often do the school instructional leaders (principal, administrators, instructional specialists, master teachers) observe teachers to monitor instructional practice and curriculum delivery? ☐ daily ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never
25. How often is student performance data studied and analyzed to adjust plans according to student needs? ☐ daily ☐ weekly ☐ monthly ☐ bi-annually ☐ annually ☐ never

Student Progress Questions

Please indicate the percentage of students mastering the following skills by the end of the school year:

Language Development
26. Use language to express emotions and ideas ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
27. Use books appropriately, turning pages and telling stories ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
28. Retell a story using own words ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
29. Recognize alphabet letters ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
30. Understand and follow instructions ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
Mathematical Development
31. Able to sort objects by color ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
32. Able to sort objects by size and/or shape ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
33. Match objects one to one ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
34. Recognizes simple shapes (circle, square, triangle, rectangle) ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
35. Recognize numbers 1 – 10 ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
36. Is able to count from 1 – 10 ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
Scientific Development
37. Recognize basic colors (red, yellow, blue and green) ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
38. Name and describe animals and where they live and what they need ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
39. Describe weather and recognize characteristics of the seasons ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%
40. Recognize the five senses ☐ 0-20% ☐ 21 – 40% ☐ 41- 60% ☐ 61-80% ☐ 81-100%

APPENDIX D

CONSENT FORM

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

AUTHORIZATION TO PARTICIPATE IN RESEARCH PROJECT

Completing and returning the questionnaire indicates your consent to participate in the research project entitled Preschool Curriculum: Choices that Promote Learning. This survey should take not more than 15 minutes to complete. No known research-related risks (physical, psychological, social, or financial) can be expected from this survey.

Participation in the project is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. All personal information is strictly confidential, and no names will be disclosed.

By participating in this survey, respondents will have the opportunity to convey information regarding the use of a set curriculum in the preschool in which they work and how it is implemented and monitored. Once data compilation is complete, results will be returned by self-addressed mailing envelopes to the researcher. The results will then be used to review and determine if a set curriculum leads to a more successful preschool program, and whether or not teacher certification and training in the use of the curriculum have an impact on student success. Respondents will also have the opportunity to request research results.

Once surveys are completed the data will then be coded and entered into the SPSS program to be analyzed by the researcher. All surveys will be securely stored in a locked file cabinet. The researcher may also choose to submit this study for presentation and/or publication. After the completion of this research project, the researcher will destroy and dispose of all surveys.

Questions concerning the research at any time during or after the project should be directed to Renee Curet Criddle, 228-990-5007. This project and this consent form have been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.

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